THE LANCET.

VOL. II.] LONDON, SATURDAY, JULY 10. [1829-30.

LECTURES ON SURGERY, MEDICAL AND OPERATIVE,

DELIVERED AT

St. Bartholomew's Hospital;

BY MR. LAWRENCE.

LECTURE LXIV.

Caries of the Vertebral Column.—Injuries and Diseases of the Nerves.—Wounds and Tumours of Nerves—Treatment.—Neuralgia.—Sciatica—Treatment.—Tic Douloureux—Causes and Treatment.—Diseases of particular Nerves.

Caries of the Vertebral Column.—The vertebral column is subject to an affection of a different nature from that which I described in the last lecture as producing a curvature of the spine. The affection that I then described is chiefly incidental to young subjects, to whom the present is not always confined, since it may take place in persons comparatively advanced in years, although it rarely happens after the periodof puberty. This affection is,

Caries,—a disease which I have already described generally, and respecting which I have, therefore, now, only to point out the particular circumstances which distinguish it when situated in the spine. This disease attacks only the bodies of the vertebræ; that is, it attacks that part of the bony structure of the spinal column which is its most frequent seat in other parts of the skeleton,—the cancellous, or spongy part. The processes of the vertebræ, which are composed of firm or compact bony tissue, it does not attack. It commences with pain of the affected part; sometimes with more or less swelling of the soft structure immediately surrounding the seat of disease, with uneasiness on pressure there. After a certain time the bone, which in the first instance is inflamed, ulcerates—goes into a state of caries. In the progress of the disease this ulcerative process attacks the bones to such an extent, that large portions of one, two, three, or more of the bodies of the vertebræ are actually destroyed. When we come to examine the patient after death, there appears a considerable chasm, or gap, in the vertebral column, in which fragments are found completely loosened, and detached from the surrounding processes. The specimen I now show you, exhibits the kind of devastation which this disease is capable of producing on the anterior part of the vertebral column. Sometimes it seems to commence in the inter-vertebral-fibro cartileges; sometimes in the bodies of the vertebræ.

Caries of the spine, like the same affection in any other bony structure, affects the soft parts immediately contiguous to the diseased bone, and produces inflammation in them, terminating in abscesses, the matter of which finds its way to the external surface, frequently, however, taking such a course as leads it to point externally at a considerable distance from the primary affection; and it is chiefly in affections of this kind that we find those abscesses which constitute *psoas*, or *lumbar abscess*.

A considerable portion of the bony column which has to sustain the head and upper part of the body, being thus destroyed, the superior portion of the spine is pressed downwards upon the inferior, by the weight above it, so as to fill up the vacuity which has been created by the ulcerative process. The consequence is, that after ulceration has gone on to a certain extent, the spine bends forwards, and becomes crooked; but the curvature which is thus produced, essentially differs in its nature and direction from that which takes place in consequence of the rickety affection of the spine that I before described. The curvature in the present case is always in the anterior direction, while in rachitis it is to one side. If you look at two trunks, in one of which the spine is affected by the curvature I mentioned to you in the last lecture, and the other in which the column is bent in the manner I am now describing, you will see that the contrast is very remarkable. Here is a spine curved laterally, from a general softness of the vertebræ: you observe

the irregularities; there is more than one on each side. And here is another spine affected by the disease which I am now describing; it is bent forwards; this has been called the *angular* curvature of the spinal column, in contradistinction to the lateral curvature. The bending is attended with unnatural prominence of the spinous processes; the spine presents an angular incurvation forwards, and hence is called *angular*. Here are different specimens, showing the disease in its various stages. Here is a very rare specimen, the ulcerated bodies of the vertebræ being crushed, and giving way, under the weight of the parts above. Here, again, are specimens in which the affection has gone still further, and here you see one in which the disease began in the inter-vertebral-fibro cartilage; there is a gap in the column produced by the destruction of one of those cartilages.

Now when you see the extensive destruction that is produced in a case of this kind, and consider how important a part of the frame is that which has been thus disorganised, you would conclude that the powers of nature must be inadequate to stop the disease and repair the ravages thus caused; indeed the powers of nature do not go to the extent of repairing this loss; but if the disease stop, which it may do, either spontaneously, or in consequence of the employment of remedial means, the powers of nature are so far sufficient to repair the disease, that with a sacrifice of the proper figure of the trunk, the health and general powers of the frame may be restored, and recovery accomplished entirely—by means of the curvature itself. The incurvation forwards is necessary to fill up the deficiency produced by the ulcerative absorption. The bodies of those vertebræ which have been partially destroyed, cannot be restored, for as the spine bends forward, the upper part comes in contact with the inferior, and an imperfect kind of anchylosis ensues; some additional bony matter is thrown out, which attaches the two ends of the chasm, consolidates them together, as we might say, gives a sufficient degree of solidity to the parts, and enables them to sustain the weight of the body above, and to admit of the ordinary motions of the trunk. The curvature, therefore, here, is really only a necessary part of the curative process. The disease cannot be brought to an end with preservation of the straight figure of the spine, where it has gone to a certain extent; nor when the curvature has once taken place, will any attempt to restore it succeed. *Early lateral* curvatures of the spine may be entirely removed, and the back bone may be restored to its former straight condition, but nothing of this kind can be accomplished in the case of incurvation forwards; if the carious disease of the bodies of the vertebræ have really taken place, it is in vain to attempt such a cure.

You will naturally conclude, that this disease of the vertebral column is attended with more or less serious affection of that part of the spinal cord which is included within the diseased portion of the bony canal. In the commencement of the affection, the irritation of the chord produces pains, cramps, numbness, spasmodic twitchings, convulsions of the various voluntary muscles of the parts which receive their nerves from the affected portion of the chord; these affections, also, often extend to the muscles which derive their supply of nerves from the part of the chord which is below the seat of disease. These effects, too, are not confined to the voluntary muscles, for, in consequence of the connexion existing between the spinous nerves and those ganglia from which the contents of the thorax and abdomen derive their nervous supply, the functions of the various organs of respiration, digestion, and so on, are often more or less seriously affected by the irritation in question. In the early stage, then, of the affection, these symptoms are observed:—an altered sensation, and, in particular, a feeling of pain, numbness, twitchings, and convulsive affections of the lower extremities. But if the disease proceed, more particularly in cases where, in consequence of the approximation of the upper to the lower part of the diseased vertebral column, pressure comes to be exercised on the spinal chord, then the affection shows itself in paralysis, loss of motion and sensibility of all the parts below the seat of injury; in short, paraplegia. The patient loses sensation and the power of motion in the lower extremities, all control over the muscular coat of the bladder, and the sphincter muscle of the rectum, and the urine and fæces pass away involuntarily. Here is a specimen of a case in which a natural cure has taken place; on reckoning the spinous processes, we shall find that about four bodies of the vertebræ are gone, have been entirely destroyed by the ulcerative process. Here is another of the same kind, where four also are gone, and where the natural cure, by imperfect anchylosis, has ensued.

Treatment.—The treatment of caries of the vertebral column is the same as that which I have already had occasion to describe, in speaking of the treatment of caries generally. In the commencement it must be antiphlogistic. You must adopt those means that are calculated to diminish the inflammation which constitutes the primary stage of caries, and precedes the ulceration. The local abstraction of blood, with other mild antiphlogistic measures, will accomplish the purpose. Whatever means, however, you adopt, *rest* in the hori-

sontal position is absolutely necessary. You will easily conceive, that if the weight of the head and upper parts of the body is still bearing on the bones which are in this state of disease, and the muscles surrounding them are still in action, that there must be an irritation going on, constantly tending to keep up and aggravate the disease. Rest, therefore, is one important point to be attended to from the very commencement of the affection, until the cure is effected by anchylosis. Here, as you will observe, there is a very material difference in the treatment of that disease of the spinal column which produces angular curvature, and that which produces the lateral curvature; for I mentioned to you, that exercise in the open air, perfectly free and varied exercise, which would call into action all the muscles of the spine and limbs, constitutes an essential part of the treatment in a case of lateral curvature, while the same proceeding would not only be inapplicable, but highly injudicious, and, indeed, exceedingly detrimental in the treatment of the other affection.

When the inflammatory symptoms are put a stop to by this course of proceeding, we then come to consider the propriety of arresting the disease by the means of counter-irritation, respecting which I have nothing particular to add to the observations I have already made. Caustic issues, setons, moxæ, are the most eligible means for accomplishing this. On the Continent, the actual cautery is applied for the purpose.

I should observe to you, however, that you are not to consider it necessary to have recourse to these measures in all cases. This is an affection to be found in scrofulous subjects; in those who are naturally of a weak constitution; and the existence of the disease itself is a source of great irritation to the frame. There are weakly subjects labouring under this complaint, where the general powers of the system would be lessened by any mode of applying counter-irritation. There are cases, consequently, in which you would be precluded from having recourse to measures of this kind, and in which you must confine your practice to the mild antiphlogistic treatment I have described. Keeping the trunk at rest, employing general means for invigorating the frame, such as residence in pure air, attention to diet, giving steel and bark, and, in fact, employing the medical treatment which is calculated to restore the health, will be sufficient, without adding any measures of counter-irritation.

Injuries and Diseases of the Nerves.

When the *nerves* are *divided* by a wound, if the divided extremities remain in contact, they will become united like any other of the soft parts of the body. It has been questioned, under these circumstances, whether the substance which joins them is really nervous texture or not. However, we find that when the ends of a nerve that has been divided are thus reunited, the nerve recovers its functions; that it has the power of again conveying sensation or volition; and that the medium of union answers all the purposes required.

There is nothing peculiar in the symptoms produced by wounds of nerves. In the case of amputation of the thigh or arm, all the large nervous trunks belonging to the limb are included in the division, and still there is nothing different in the progress of the wound, nor in the immediate symptoms, from which there would be if the injury had consisted of a perpendicular section of the soft parts, without the division of any nerves of consequence.

It has sometimes been supposed, that the puncture, or partial division of a nerve, is capable of producing serious consequences; and the important effects which have ensued from venesection have heretofore been commonly attributed to wounds of the cutaneous nerves—to punctures of the nerves, which are situated between the skin and the vein. In the great majority of instances, the mischief arising from venesection consists in inflammation of the vein itself, or in inflammation of the integuments surrounding it, or in erysipelas, particularly phlegmonous erysipelas of the integuments. All these are serious enough, but I believe the instances are extremely rare in which any ill consequences of venesection can be clearly traced to the injury of a nerve. Yet I would not venture to say there absolutely are no such cases; for instance, I have a lady under my own care, who came to me from a remote part of England, in consequence of her having suffered many months from an extremely painful affection of the forearm and hand, consequent on bleeding. She did not suffer from the operation at the time, nor did she experience much inconvenience for a few days afterwards; but after this there gradually came on a very painful state of the whole of the limb below the part at which venesection had been performed. For this she had undergone treatment, of a tolerably active kind, such as the application of leeches, blisters, friction with irritating substances with a view to produce eruptions, and a great variety of similar means, but under all which, according to her own account, her sufferings had rather been aggravated than relieved. When she came to me, the whole of the forearm and hand was so excessively sensitive that she could not bear any body even to come near her. I recollect, on my approaching her, that she caught her arm away in the greatest alarm, and would not

allow me to give her the least assistance in unwrapping it; she said she could not allow the air even to come upon it without suffering severely. After she had taken off the numerous envelops, I found the part was not materially swelled, but bearing the marks of the active surgery which had been tried upon it. She was nearly disabled from using the wrist or fingers, which was a very serious inconvenience to her, as the affection was in the right hand and arm. She was totally unable to write, or to do any needlework. She could, perhaps, make some trifling motions with the fingers and thumb, but that was all; she could not bear the arm to be touched, dreading the approach of every thing that was likely to come in contact with it. She had a furred tongue and a disordered state of the stomach and bowels, and was, as you would suppose, after this long, severe state of suffering, much out of health. There was nothing to account for the symptoms, unless it were some particular state of the nerves consequent on the operation of venesection; and the nature of the symptoms generally, the violent and constant pains in the part, showed that, at all events, the nerves were essentially involved in the affection. I recommended her, in the first instance, to lay aside all the coverings which she was accustomed to use, and to allow the parts to be exposed to the air, and that when accustomed to the contact of the air, she should commence sponging it over with tepid water so many times a day, gradually diminishing the temperature till she could use cold water. As to the general treatment, I requested her to pay attention to her diet, and employ some simple means for bringing the stomach and bowels into a healthy state. In the course of a few weeks after this treatment was resorted to the arm almost entirely got well; I do not know how long it was before it quite recovered, but I think that in less than two months she wrote me a note to thank me for my care of her. This was the first instance of her writing since the affection came on severely, and a very well-written note, in point of penmanship, it was.

When nerves have been divided, as in the operation of amputation, the extremity which is left swells into a kind of bulb; a sort of oval tumour forms, or rather the end of the nerves swells into a bulb of oval shape, of perhaps about the size (in the case of a large nerve) of a nut or a filbert; this is found to possess very considerable firmness, sometimes approaching almost to a cartilaginous structure, so that it is cut with difficulty, and makes a noise under the knife as it is divided. There are instances in which the extremities of nerves thus enlarged seem to produce very painful symptoms after amputation. Whether it is from the extremities of the nerves being involved in the cicatrix which follows the operation, or, in certain cases, that the ends of the nerves are by the contraction of the cicatrix pressed against the sawn end of the bone, I do not know; but in many instances very painful sensations are experienced after a certain time, at the end of the stump, confined in some cases to a particular spot, and appearing to indicate that the affection depends upon the condition of the divided nerves at a certain part of the cicatrix. Mr. Langstaff has paid particular attention to this; he has examined the cicatrices after death, and he has found such appearances from the bulbous swellings of the nerves, particularly in instances in which patients have suffered from the painful affection I have mentioned, as have led him to infer that it depends, in some measure, on the divided extremities of the nerves being implicated in the hardened cicatrix, thus experiencing a degree of irritation which leads to the painful affection in question. In some one or more instances I think he has found it necessary to amputate higher up, in consequence of the extremely sensitive state of the stump, in short, of the almost intolerable agony which the patient has experienced. He mentions a practical rule, the observance of which is of the highest importance, — that of cutting with a pair of scissors after the amputation, half an inch or an inch from the end of each divided nerve in such a manner as that the extremities of the nerves shall not be at all exposed to this source of irritation. He says that when this rule has been observed the affection has not taken place.

Nerves are subject to the development of *tumours* in their substance, just as tumours may grow in any other soft part of the body. This is a rare occurrence, and, indeed, is so rare that I have never witnessed an instance in the living subject, although I have seen specimens of it in museums; I cannot say, therefore, that I have much to observe on the subject, except to tell you that such tumours may be developed, principally in the nerves of the upper or lower extremities, in the popliteal of the leg, and some of the branches running along the arm. The tumour is generally of an oval shape. The nature of the tumour is clearly pointed out, in the first place by its position in the trunk of the nerve; in the next place by pain on pressure in the course of the nerve and its branches; and in the third place by the tumour being easily moved from side to side, though confined in the longitudinal direction.

Treatment.—The *treatment* consists in extirpation with the knife. The tumours may attain a considerable size. The book which is now before me contains the figure of one of those tumours; it is as large, I

think, as an orange, and is a tumour of the popliteal nerve. Those gentlemen who wish for more information respecting them may refer to the second part of the third volume of the Transactions of the Medico-Chirurgical Society of Edinburgh, where they will find a paper on the subject by Mr. Wood of Edinburgh, a paper on *neuroma*, for that is the name which he gives to tumours formed in nerves. In that paper he has collected a great number of cases and circumstances respecting them.

Neuralgia.—The nerves are liable to inflammation, producing an affection which is characterised by great pain, by excessive and almost intolerable agony.

The nerves are also liable to affections, in which nothing like inflammation of the part can be traced, where, to use our technical language, the nerve is said to be merely *functionally* disordered, and where pain or altered sensation is the principal feature of the complaint. These affections of the nerves, from the circumstance of the pain being one of their principal characters, have been denominated *neuralgia—pains of nerves.* These are diseases which do not in general terminate fatally, so that we have not much opportunity of investigating them by examination after death. The pathology of these affections is consequently but imperfectly understood.

It must be obvious to you that inflammation of the nerve, that a case in which the nerve is actively inflamed, ought to be distinguished from one in which the nerve is merely the seat of a painful sensation; yet both of these, in technical language, come under the denomination of neuralgia.

Now all nerves are not equally liable to these affections. It has been generally considered that neuralgia is only incidental to the voluntary nerves—those that are distributed to parts which are under the influence of the will. We are not perhaps justified in saying this decidedly, but, at all events, we know so little of neuralgic affections of internal nerves, that is, those nerves which proceed from the different ganglia to the visceræ, that it may be almost said, with reference to our state of information on this subject, that they have no existence there. Certain nerves are more liable to them than others, and those most exposed to external influence, injuries, and violence of different kinds—those which are most habitually exerted—are in a state of the most constant and direct exertion—are the nerves which suffer most frequently. The great sciatic nerve, and the facial branches of the nervus trigeminus, are much more frequently the seat of neuralgic affection than any other. The affection of the *sciatic nerve*, —*Sciatica*, as it is called, is an example of inflammation of the nerve from which it derives its name, or, at least, we very frequently see that form of the affection in this nerve. The complaint here is characterised by severe pain extending along the trunk of the nerve, whence it is to be traced along its various ramifications. Sometimes, however, the pain seems to begin in one of the branches, and to shoot along upwards towards the trunk as well as downwards. This pain is aggravated by any motion, exertion, or position, in which the nerve is subjected to pressure, by such diet as is attended with excitement, by external heat, and by all the various circumstances which are capable of aggravating an inflammatory affection.

The disease, which in the first place exhibits an acute kind of character, marked with the symptoms I have mentioned, lasts a long time, and then becomes chronic, and shows itself more by a painful affection than by those symptoms which denote acute inflammation of the nerve; then the pain will perhaps come on in fits, and there will be times when the patient is comparatively free from suffering. It is attended with a considerably impaired state of motion in the limb, and hence the muscles waste away, the limb shrinks, and, ultimately, if the disease lasts for a long time, falls into a state in which the patient has little power over it.

Now, on examining these cases after death, which we seldom have an opportunity of doing, except in old and chronic cases, we sometimes find the nervous trunk exhibiting marks of inflammation; that is, the nervous chords are surrounded by a thickened and indurated membrane, and the nerves themselves seem expanded, in consequence, no doubt, of the effusion into the tissue which connects their filaments together.

Treatment.—In the acute stage, local loss of blood is of advantage. Blood may be taken by cupping or leeches, and other means of an antiphlogistic character must also be employed; rest of the affected part is absolutely necessary. This, however, is one which cannot be so effectively controlled by loss of blood as many other inflammations. You may obtain benefit to a certain degree, but you will find that the painful affection of the nerve will probably continue, and that repeated abstractions of blood, either generally or locally, will have no beneficial effect. In fact, the loss of blood beyond a certain extent will probably have an injurious effect, for a diminution of the general strength generally aggravates such a complaint. The loss of blood must, therefore, be moderate. Counter-irritation, particularly by blistering along the course of the nerve, has been ascertained to be an advantageous mode of treatment. You apply a blister over the course of the trunk, and

after that a fresh one, as soon as the sore left by the former is healed. In the chronic stage of the disease, you are confined pretty much to a general mode of treatment—the exhibition of alterative doses of mercury, with mild aperients; medicines calculated to restore the general health, sea-air, and warm bathing. These, with counter-irritation, constitute the measures to which you must trust.

The severe sufferings of the patient lead us, both in the chronic and acute stage of the disease, to the employment of narcotics, which we should administer to procure relief, especially at night. In conjunction with these, the use of sarsaparilla internally, particularly in the case of persons who have been long afflicted, is attended with considerable advantage.

Tic Douloureux.—The branches of the nerves distributed over the face—the branches of the fifth pair—are very frequently the seat of neuralgia, which cannot be referred to acute inflammation of the nerves. This form of the affection is called *tic douloureux—neuralgia facialis*—neuralgia of the facial nerves. The affection is seated, generally, in particular branches, in the infra-orbitary, in the supra-orbitary, or in the branch which comes out of the foramen near the chin. The pain, which is exceedingly intense and severe, commences in the trunk of the nerve, and shoots along the various branches. Sometimes more than one branch is affected. The pain is by no means constant in this affection; the disease, in fact, consists of fits of pain, with intervals of pretty complete absence of it; the patient may be free from pain for weeks or months together; this is a circumstance which makes us extremely uncertain as to the actual cure of the disease. We do not know when a patient can be said to be cured of an affection like this, because the complete absence of symptoms may merely be one of these intervals, and after all the symptoms have been apparently removed, we may find the pain return again. Now, words are hardly adequate to describe the dreadful sensations of an attack of this kind, and the excessive degree of pain to which those afflicted by tic douloureux are subject. Sometimes patients experience a kind of electric shooting, or darting, which has been described by Frank to be like the flashing of lightning. These shootings come on from the mere motion of the affected part; for instance, in the act of mastication or deglutition, or by the blowing of a little cold air upon the face, or other slight causes of that kind. The severity of these attacks is such, that even patients of the greatest resolution and command of mind cannot contain themselves; they scream out, throw their hands up to their head, the eyes become filled with tears, and the most excruciating agony is experienced. These convulsive motions take place not merely at the seat of disease, but almost over the whole body, and are symptoms of the great agony which is experienced. Patients suffer in this way year after year, for the complaint is not very often fatal. I have known persons labour under it for a very great number of years, and die at last of a good old age, the length of life not having been abridged, apparently, by their sufferings, however severe these may have been.

Causes.—The *causes* of the complaint are very obscure. In some instances other painful diseases about the face bring it on. The occurrence of tic douloureux has been traced to the irritation of a carious tooth. In some instances disease of the bony canals through which the nerves pass has been found to be the cause; and this seems to be a probable source of the complaint, for if there be disease in those canals, the constant irritation kept up by them in the trunk of the nerve will very well account for the affection. On examining the cases, however, after death, we find nothing that will enable us to account for the sufferings of the patients. I remember attending a gentleman for a great many years who was the subject of tic douloureux in a very marked form, and I dissected out the nerves of the face very carefully after death; but I could find no alteration in them, nor any thing in the brain to afford me information on the subject. To be sure the negative proof is not very satisfactory—for to say that there was no disease of the nerves, in such a case it would be necessary to follow up all the nervous filaments throughout their bony canals, and that would require a very minute and a very long dissection; I believe there have been hardly any cases so dissected.

Treatment.—We are at a loss in the *treatment* of this case. In fact, there are a great many remedies, which is a proof that there is none of generally-admitted efficacy. It has been said that this disease will be quieted if you regulate the digestive organs, for you very often find those parts disturbed; but the truth is that if a person have a clean tongue, and the stomach in a proper state at the time this disease commences, the paroxysms of torturing pain are enough to disturb them. This, in fact, is so simple a mode of treatment, that if it were efficacious and could be depended on, of course it would be well known. Narcotic remedies have been tried in all forms; opium, hyoscyamus, conium, every thing that can be regarded as a remedy of this kind, and as capable of acting on the nervous system for the purpose of soothing pain, has been employed. Of these I must observe that according to my own experience the most powerful and the only one on which any reliance is to be placed is the

conium. I have seen in several cases when given largely, and at short intervals (and it must be given in such doses as will produce some of its peculiar effects on the nerves), that it has appeared to put a stop to the affection, and has apparently cured the disease; but in many instances where persons have remained well for several months, and even in one case for a year, the disease has recurred, though it was again controlled by the exhibition of the conium. As a general measure, therefore, I place more reliance on the conium than on any thing else. You must combine with those medicines such measures as are calculated to prevent their unfavourable action on the stomach and alimentary canal, taking care to ensure the regular action of those important organs. Mercury, arsenic, bark, oleum terebinth., these have all been employed without any good effect. The carbonate of iron is a remedy in vogue, in large doses, beginning with half a scruple or a scruple, and carrying it on to a drachm or more, three or four times in the course of the twenty hours, and in certain instances it has been said that this medicine has produced beneficial effects. There are many instances related in which a complete cure of neuralgic affection has been ascribed to the employment of the carbonate of iron.

In cases of neuralgic affection of the face a surgical operation has been performed; the affected nerve has been divided; and, in certain instances, a temporary benefit has been derived from the operation, but very generally the disease has come on again. So that now this plan is pretty generally abandoned.

Diseases of particular Nerves.—Sciatica and tic douloureux are cases of neuralgic affection of a very marked character; but there are a great number of instances of affections, the seat of which must be ascribed to the nerves, that are by no means so strongly marked, which are yet of considerable importance from the suffering and inconvenience they produce. There are a number of affections of this kind in which pain or altered sensation of various kinds is experienced, without any local disease which might lead us to suspect the existence of inflammation. Hence arises, in common language, the expression *nervous diseases*, a term which does not indicate any thing in their seat or nature, but which is rather to be understood as a negative term employed where there is no apparent inflammation, and which is a common kind of disease.

The nerves are the seat of sensation and motion; they convey the determination of the will, and they are the instruments of motion as well as of sensation, so that various cases in which the movements of a part are disturbed ought, perhaps, also to be classed under the head of neuralgia. If we take this view of the case, we shall include a much larger assortment of cases under this head than has hitherto been customary, the term neuralgia having hitherto been confined to instances of severely painful affections of parts. This larger acceptation of the term has been adopted, and more commonly used of late. In a work published by Mr. Teale, of Leeds, on neuralgic affections of the nerves which proceed from the spinal chord and the various ganglia to the viscera of the thorax and abdomen; Mr. Teale employs the term neuralgia in this latter sense. These neuralgic affections will exist without any local inflammation, that is, there will be pain or altered sensation of various kinds, impaired or altered motions of different natures without any apparent inflammation.

In considering the subject now before us, you must bear in mind the structure of the nervous system, and the relations that exist between the nerves and other parts. Recollect that the nerves at one extremity are connected to certain large masses; that is, the brain, the spinal chord, or the ganglia; that they pursue a certain course through the different parts of the body, and then are distributed to certain organs in which they become the instruments of sensation and motion. Now, in investigating any case in which the sensation or the motions of a part are affected as I have described, without any local disturbance of an inflammatory kind, or any organic change, you must not direct your attention simply to the part in which the sensation is said by the patient to reside; you must observe the course of the nerve, and you must also investigate the state of the nervous mass with which the other extremity of the nerve is connected. It is from impressions on the extremities of the nerves expanded on the various organs, that sensations are ordinarily to be ascertained. The course of the nerve and the connexion which it has with the principal nervous mass, are not under ordinary circumstances exposed to any kind of impression. When, therefore, from disease in the nervous mass or disease affecting the course of the nerve, irritation arises, we find it is referred by the patient to the sentient extremity of the nerve, although there may be no disease or attack at that part. Thus we often find the cause of disease to be very remote from the situation in which the patient describes the symptoms to exist, and in order to describe those cases, for, as I have just mentioned, they are often very obscure, we must examine carefully the state of the nervous mass at the part which is connected with the nerve supposed to be diseased; we must examine carefully the course of the latter from the nervous mass to the affected organ, in order to ascertain what part is in a state of

disease. Until you have so done you cannot be satisfied respecting the source of the local symptoms. The instances are numerous in which the complaint is seated in the head; and the affection of the brain has produced an alteration of the state of the external parts. You may have squinting, double vision, the paralysis of the levator palpebræ superioris, and impaired motions of different parts. I lately had a case of this kind under my care. It was that of a lady in whom numbness of the right foot had come on. She did not pay much attention to it, for the sensation was not a very troublesome one. After it had continued for about two or three weeks, numbness of the right hand occurred. She described the sensation by the term *numbness*, as being the nearest word she could use to convey an accurate notion of the complaint. It was a peculiar dull sensation of the part, quite different to any ordinary feeling, but unattended with impaired motion either of the hand or foot, which she was able to exert, and all the motions of which she could perform. After these symptoms had lasted three or four months I saw her, and found the parts inflamed from the remedies that had been used; her bowels had been opened and she had been bled. She felt weak, complained of the want of flesh, and would not for a moment suppose there was any disease either in the hand or foot. My attention was chiefly directed to the state of her head, to ascertain if there was any thing there to lead me to a right understanding of the case, for there was no reason to suppose that any thing wrong existed in the spinal chord. On examining her head it appeared that she had some little pain there, but nothing very definite or particular. Her pulse was very small and feeble. In this case the abstraction of blood from the head, the application of cold, particularly to the forehead, the employment of mild aperient medicines, and a regulated diet, subsequently the application of blisters to the back of the neck, and the use, rather free use, of mercury, but not carried so far as to affect the mouth, completely removed the sensations and restored the lady to health. But a difficulty occurred in the treatment of this case, from the apparent incongruity between the feeble and reduced state of the pulse, with her own sensation of feebleness, and the nature of the measures that seemed necessary to reduce the excitement in the head. Indeed in one of those moments of feebleness she had experienced such a fit of fainting as required the liberal use of ammonia and brandy. Yet in forty-eight hours afterwards, she experienced great relief from the abstraction of thirteen ounces of blood, and notwithstanding her feebleness I was enabled, with the assistance of her husband (who was made sensible of the necessity of the measures), to pursue a course of treatment, which, under other circumstances, could not have been permitted. Now, this was an instance of alteration in some remote parts of the body in consequence of disease going on in the head.

The pains and convulsive motions, the cramps and uneasiness, that are produced in consequence of the irritation of the spinal marrow by caries of the vertebræ, are examples of neuralgic affections proceeding from causes affecting the spinal chord; and I should here observe to you that Mr. Teale, in the work I have mentioned, ascribes a large class of cases in which there is painful or altered sensation of various kinds either in the neck or trunk, or in the limbs, to disease existing in the spinal chord; which disease is evidenced in many cases, he says, by an external tenderness on pressure ascertainable by examination in that region. He says also that in his opinion various affections of the contents both of the thorax and the abdomen are to be ascribed to a similar condition of the ganglia situated in those cavities, and with which he says an affection of the spinal chord co-exists; so that you have the same symptoms pointing out these affections of the ganglia, as you have where the disease exists in the spinal chord. I think you will find the view this gentleman has given and the cases he has stated well worthy of attention; and I shall be satisfied with referring you to them; merely observing, that in the instance to which he has referred he states, the painful affections in question, after lasting for months, and indeed for years, have been quickly and effectually relieved by the abstraction of blood from the affected part of the spine, and the application of blisters in that situation.

In the same way you have local nervous affections which act on the central masses of the nerves, and extend to distant parts of the body. Every one has experienced what is called the *foot or the leg going to sleep*, an effect which is produced by pressure on the sciatic or popliteal nerve. The sensation is not experienced at the place of pressure, but often at the extremity of the limb. I remember two instances of aneurism of the axillary artery which came under my attention, where in the first place the symptoms were totally mistaken. The pain, which was of the most violent kind, was limited in the first place to the arm and forearm,—and treatment was adopted under the apprehension of its being rheumatism; (I remember on one of them seeing a large red surface where a blister had been placed under the idea of so removing the pain.) It appeared that the uneasy sensations arose from the development of the aneurismal tumour in the midst of the axillary plexus of nerves; and the death of both of the patients enabled me to ascertain that

the tumour not only proceeded from amongst the nerves, but that some of them were actually flattened out into the form of tapes by its pressure.

A tumour developed in the course of any nerve will cause an extremely painful sensation. Mechanical injury of any kind to the trunks of nerves has had similar effects. It is necessary, therefore, that you should carefully give the utmost attention in investigating what, in common language, are called nervous diseases, and which we consider to come under the head of neuralgia.

I should observe that there are some cases of particular pain of which we are at a loss to give any account,—some cases where there is a particular pain, owing perhaps to something existing in the alimentary canal, which pain has been removed at the same time that the cause I have mentioned is removed. I remember a case of this kind which I should be at a loss fully to explain. A person lost a part of a front tooth; the crown of the tooth was sawn out, leaving the root in its place, and the part removed was replaced by a tooth of that kind which is called a *pivot* tooth, and in which there is a metallic stem substituted for that which has been lost; that metallic stem being fixed into the cavity of the roof left in the socket. This person had a most dreadful pain in the two thumbs, which quite puzzled the patient and those who saw him, as no circumstance had occurred to him of a marked kind except the putting in of this tooth. But when the tooth was taken out the pain ceased. They would hardly believe that this could have produced the pain, and the tooth, therefore, was replaced to ascertain the actual fact, when the pain again occurred in the thumbs, and the parties were obliged either to abandon the use of the tooth altogether, or to reduce the metallic pivot. This last they did, and then the pain was not produced. The case was communicated to me by those who saw it.

[A friend informed us that he is acquainted with a person who suffers a very acute and peculiar pain in the upper incisor teeth (which are perfectly sound) whenever the bladder is unusually distended with urine, and the pain ceases the moment the fluid has been evacuated.—Ed. L.]

PHYSICIANS ONLY,—CAN PRESCRIBE.

The following has been transmitted to us as a prescription written by a Dub residing near Yarmouth:—

℞ *Sulph. magnes. exsic.* ʒss;
Magnes. calcin., ℈j;
Acid. tart.
Sodæ carb. a., ʒj;
M. ft. pulv. xij.

ON THE

EPIDEMIC FEVER OF IRELAND;

By D. J. Corrigan, M. D.

Lecturer on Materia Medica, one of the Physicians of the Sick-Poor Institution.

Ὁ λοιμος μετα λιμον.
Greek Adage.

Cases of Fever on the Books of the Sick-Poor Institution for the years 1826-7-8.

1826:		1827:		1828:	
Jan.	81	Jan.	912	Jan.	93
Feb.	78	Feb.	405	Feb.	103
March	71	March	502	March	74
April	172	April	278	April	95
May	356	May	263	May	65
June	520	June	264	June	76
July	617	July	201	July	61
Aug.	901	Aug.	261	Aug.	84
Sept.	1,035	Sept.	125	Sept.	124
Oct.	1,248	Oct.	136	Oct.	93
Nov.	804	Nov.	116	Nov.	106
Dec.	1,447	Dec.	129	Dec.	85

The districts of the Sick-Poor Institution comprise seven parishes, in the poorest part of the city, containing in all, according to the census taken in 1821, a population of 59,788.

Two years and a half have elapsed since the last visitation of epidemic fever.

That after so long a lapse of time, at a period when we are free from it, it should be a subject to occupy these pages may seem strange.

It is not when an overwhelming evil presses upon us that we are most capable of forming a cool and impartial estimate of its nature or its causes, or of deciding upon the best preventive or remedial measures.

It is after the evil has passed away that we often best determine what should have been our measures; and if that evil, as epidemic fever, be of such a nature as to render its recurrence probable, we may, in the interval, best decide what should be our future course.

Experience has taught us, that we cannot flatter ourselves with the hope of an exemption, of any considerable duration, from epidemic fever; we are to expect its recurrence, and we should be prepared to meet it. The time for deciding upon the course to be pursued will not be when fever, having again set in, may be rising around us with an average increase of upwards of 150 cases per month. Such a period would call for active efforts, not for doubting experi-

ment or inquiry. The present time may, with advantage, be devoted to a calm and deliberate consideration of the subject; we can come to it without any bias, to which, during the presence of the evil, excited feelings, local circumstances, or prejudices, partial views, or specious authority, might incline us.

The knowledge of the cause of an evil is a main step towards its removal or prevention. The following pages will, I trust, in the instance before us, afford such knowledge, and prove that, in the production of epidemic fever in Ireland, there is one cause of paramount influence.

That prevention, especially of epidemic disease, is more desirable than cure, is a position that will not be disputed, whether regarded as a question of humanity or of cold calculating economy.

The knowledge above alluded to, should epidemic fever again impend, will instruct us in adopting measures the best adapted to meet the threatened evil.

Called at an early period of the epidemic fever of 1826, as medical inspector of the parish of St. Catherine, to give my advice and exertion to meet the increasing evil, my attention was in the first instance naturally turned to ascertain what had most influence in its production, in order that the efforts made might have a proper direction, and that the means which policy and humanity afforded might not be wasted. The rise of fever was so sudden, its spreading so alarming, that the most prompt exertions were required, and it was a matter of the greatest moment, that in such circumstances means or time should not be expended in vain.

Amid conflicting opinions that existed as to the cause of the epidemic, I turned for information to the histories of previous similar visitations. With very trifling shades of distinction, all the epidemics of the last century and a half have presented the same characters. I may mention, as points of resemblance, their commencing among the poor, their continuation through all seasons, the frequent relapses, the comparative exemption of the wealthy, dearly purchased, however, by the much greater relative mortality. These features all the epidemics of this country have presented in common. Rogers, whose description of the epidemics of this country is universally acknowledged to be accurate, says, "Though at first view (to a person who hath not made the present argument the object of his serious thoughts for some years past) there may seem to have appeared amongst us, at different times, several successions of different fevers, yet I may safely venture to affirm, from a series of observations carried on for the space of nearly four-and-twenty years, that no new epidemic fever hath shown itself amongst us during that space."* "It is the general opinion, that the diseases do not differ from the fever which usually prevails in Ireland."† It is not necessary to this essay to go into the minutiæ of symptoms, which, if brought forward, would still more strongly prove the correctness of the opinion advanced, that all our epidemics have been of the same nature. I might refer to Rutty's History of the Diseases of Dublin for the space of forty years, in which the minute descriptions of the epidemics for that period (and they were very numerous) agree so closely, that the detailed symptoms of any one epidemic might be taken as belonging to any other.‡ It is scarcely necessary to observe, that in the epidemic of 1826, the lines of resemblance marking it as belonging to the same family were as strong as in any of its predecessors. It raged through summer, through autumn, through winter. It commenced among the poor, continued with them, spared the rich, and presented, in a high degree, what may be put down as peculiarly characteristic of our epidemics—frequent relapses.

It thus appears that all our epidemics have been of the same kind, visitations at different times (only to a greater or lesser extent) of the same disease.

Like effects generally follow like causes. The epidemics which appeared at different times, during a space of one hundred years, have presented the same characters. It was reasonable to infer, that they owed their origin to some common cause; my attention was, therefore, turned to ascertain what that common cause was. For this no mode of inquiry seemed better adapted than the inductive, to group together all the epidemics of which we have accurate accounts, noting the circumstances that accompanied or preceded each, and ascertaining if among them there was some one condition invariably present which, according to the laws of this mode of inquiry, would then be that common cause.

It is not my intention in this essay to go into a laboured or obscure discussion on the nature of fever. My object is a practical good. It matters little for the end to be attained, the prevention or removal of fever, whether the cause which shall be proved to be paramount in its production be, in the language of medicine, a proximate or a remote, a predisposing or an exciting cause.

---

* Essay on Epidemic Diseases, by Joseph Rogers, M.D.

† Appendix to first Report of the Committee of the House of Commons on the State of Disease in Ireland, p. 73.

‡ Vide Rutty, pp. 24, 52, 56, 87, 183, &c.

Following the above mode of inquiry, I present a table of the most remarkable epidemic fevers of this country of the last hundred years, noting, at the same time, in the briefest terms, the circumstances or occurrences that preceded or accompanied them.

1728—Spring mild; summer *cold and wet*, ice in the Liffey 23d June; autumn and winter variable;* three bad harvests in succession. Provisions at an extravagant price.†

1729—Spring *cold and dry*; summer *dry*; autumn wet; winter open.‡ Scarcity of crop; distress continued; housekeepers begging bread in the streets of Dublin.§

1730—Spring variable; summer *wet*; autumn variable; winter *open, mild, dry*.‖ Distress still continuing.¶

1731—Spring dry: summer *hot*; autumn variable; winter wet and *warm*;** distress still prevailing. Fever commenced in 1728, and lasted to 1732.

1734—Summer wet; autumn variable; winter mild; harvest bad, much straw and little grain.

1735—Summer again *cold* and wet; autumn wet; winter *open*. Fruits and grain very backward.

1736—One of the *hottest* summers remembered; autumn *fair*; winter *open*. Petechial fever appeared in winter of 1734, continued through 1735, became very frequent and fatal in summer of 1736, and disappeared in autumn of the same year, which brought a most abundant harvest. (Vide Rutty.)

1739—Spring cold; summer wet; thermometer not higher than in May; autumn variable; winter cold; most intense *frost*, continuing with scarcely an intermission from the 27th of December to the 14th of February of the following year. Potatoes, the food of the poor, destroyed in the pits; tillage interrupted in spring. "Great dearth of provisions this autumn, 1740, which proceeded almost to a famine in winter; the potatoes having failed, while other provisions bore double or treble their usual price."* Fever appeared in summer of 1740, increased in autumn, and rose to a terrific degree of violence in spring and summer of 1741. 80,000 persons died of fever dysentery, and in this epidemic.†

1798—Summer and autumn of 1797 wet, crops scanty, fuel scarce. 1798, gentry flying out of the country; poor out of employment; tillage neglected; consequent starvation. Fever prevalent in spring of 1798, spread in the end of summer to a frightful extent.

1799—Summer *wet* and cold; general deficiency in the crops. Fever now assumed a most malignant type.

1800—Summer unusually *hot* and *dry*, but followed, like the previous wet summer, by deficient crops; the crops, moreover, of very bad quality; the people in a state of starvation. Malignant fever continued from 1798, now raged to an unprecedented degree, began to decline only in the harvest of 1801, which was most abundant, disappeared at length in summer of 1802.

1817—Crops of the preceding year very deficient, did not arrive at maturity; corn was uncut in November, much of it lost. Corn saved was green in the husk, or malted; potatoes scanty, wet, unripe. No straw even for the beds of the poor; turf also deficient. This combined deficiency of food, fuel, and bedding, felt most severely in winter and spring of 1816-17, when fever appeared, which became very prevalent in summer of 1817. Spring and summer of 1817 wet, cold, and unproductive, as the preceding year.

1818—Spring *moist*; summer unusually *hot*; crops good; provisions in abundance. The epidemic, which had risen in spring of 1817, continued to increase at a rapid rate through summer, winter, spring, and summer again, until the autumn of 1818,

---

* Rutty, pp. 12, 22, 26.

† "Scarcity drove the poor to begin with their potatoes before they were full grown, so that they have lost half the benefit of them. Oatmeal is, at this distance from harvest, in many parts of this kingdom, three times the customary price."—*Boulter's Letters*, March, 1727. It may not be amiss to remind the reader, that March, 1727, in Boulter's letters, is, according to the present, and to a computation even then not unfrequently adopted, March, 1828. Boulter, in common with many writers of the day, dated by the civil or legal year, which in England commenced on the 25th of March, which mode of reckoning was in use until the reign of George II., when the same act of Parliament that altered the style, decreed that the year should henceforth commence on the first day of January. The time between the two periods being often marked thus, as February, 1751-52.

‡ Rutty, pp. 12, 22, 26.

§ Commercial Restraints of Ireland, p. 44.

‖ Rutty, pp. 12, 22, 26.

¶ "In the year 1731, there was a great deficiency in the public revenue, and the national debt had considerably increased. The exhausted kingdom lay under great difficulties by the decay of trade, the scarcity of money, and the universal poverty of the country." Ibid. p. 46.

** Rutty, pp. 12, 22, 26.

* Rutty, p. 83.

† O'Connell Observationes Medicinales.

which brought with it a most abundant supply of food, fuel, and bedding. Fever at the very same time began to decline, and soon after disappeared.

1826—Potatoe crop of the preceding year, 1825, very deficient at the termination of summer, when this deficiency of the poor man's crop was most severely felt. The weavers in Dublin were, by a sudden reverse of trade, thrown out of employment to the number of 20,000. Fever appeared rising rapidly in spring of 1826, reached a terrific height in winter following, declined in summer of 1827, and disappeared in autumn. Summer of 1827 produced an almost unparalleled abundance of crops.

I have thus thrown together, with a concise notice of the most remarkable preceding or accompanying circumstances, the principal epidemics of the last hundred years.

It is a maxim in philosophizing, that we must, as far as possible, assign like causes to like effects; and if upon a general view of all the *instances* adduced, we find some one condition invariably present to that condition, we give the name of cause. "We give the name of cause to the object which we believe to be the invariable antecedent of a particular change."* Epidemic fevers are the like effects; we must, if possible, assign them like causes. Upon a general view of these, with the accompanying circumstances, we find one condition invariably present, famine, that we therefore mark down as their common cause.

Even a rapid glance over the table, as I have arranged it, will show, that however all other circumstances, as time, season, climate, might have varied, this one condition, famine, was never absent. No matter how climate altered, or seasons revolved, how summer or winter rolled on, so sure as want appeared, so certainly did pestilence follow. The two have also ever kept pace with one another, as the degree of want, so has been the extent of fever. In 1728, an epidemic appeared that lasted for four years. It was preceded by bad harvests: unparalleled distress, even among the middle classes of society, prevailed for nearly four years. In 1734, after an unproductive harvest, fever set in, and after two years' duration, disappeared in 1736, when an abundant crop was gathered.

In 1739 and 40 there was a great dearth of provisions, which continued until the harvest of 1741, and so long, although there was every variety of weather, did the epidemic continue, defying alike the heat of summer, and the supposed fever-destroying influence of winter. As if to make the cause of epidemic fever so palpable as not to be passed over, unless by the most obstinate blindness, in the following year 1742, when bread was selling twenty-one pounds for a shilling, there was scarcely a case of fever to be seen among the lower classes.

The summer of 1797 was, as already noted, unpropitious to the fruits of the earth—constant rain prevented the laying up even of fuel. The state of the crop and of the country in 1798, was not such as to bring relief. The tempest of civil war was sweeping the kingdom; the gentry fled; all connexion, save that of party between the higher classes and their dependants, was severed. The peasants were either in arms, or driven from their homes; tillage was neglected, and the scanty supply of food raised was further lessened by the heartless, the fiendish ravages of the two parties. What the season spared, man destroyed. Want increased, and with increased want came increasing fever.

This epidemic, which appeared in the spring of 1798, was in the latter end of the year abroad as a plague. In 1799, the crop was again deficient, fever assumed now the worst form of typhus, but was still, in great measure, confined to the poor. The summer of 1800 came; it was a strong contrast to the summers that had preceded it; they had been wet and cold, this was hot and dry. A burning sun withered the corn and the potatoes. Scarcity became so great, that distillation from grain was prohibited, and bounties were given on imported corn; but under such circumstances the mass of the poor were still in want. Fever assumed a malignancy that enabled it to burst from the poor among the rich, and few in civil or military life escaped. It continued with unabated violence, until Providence sent, in 1801, a most abundant harvest, and then, and only then, a fever that had raged through all variations of temperature of climate and season for a space of four years, began to subside.

We may pause for a little on this epidemic. It arose in the commencement of the terrible, and never-to-be-forgotten, year of 1798, continued through all seasons uninfluenced alike by the wet and cold summers of 1799, or the tropical sun of 1800, or the again succeeding winter. The afflicted people looked to cold, to rain, to snow, to purify the air, or destroy contagion. Want continued, with want fever, until in the spring of 1801, at the end of three years from its commencement, it assumed a malignancy that defied all human power.

Was it stopped by change of climate? For three successive years every variety in climate had in turn existed; the summers had been cold or unusually hot, dry, or pouring down torrents of rain; it would,

* Brown on Cause and Effect.

therefore, be idle to charge climate with the production of the evil, or to attribute to climate its cessation. The epidemic had defied all its changes; in the autumn of 1801 came a plentiful crop, and then fever began to decline. The crop of 1801 was unequalled for goodness and abundance, and accordingly, before the end of the summer of 1802, the terrible visitant that had defied every other power to remove it, disappeared before an abundant supply of food.

I may mention here, as a passing observation, that the check of the epidemic in 1801 was attributed by some of the writers of the day to a fall of rain which occurred in the autumn of 1801. This opinion scarcely deserves a serious confutation. Those who held such an opinion, must have shut their eyes to what had taken place the preceding year, when, at the same period, a similar occurrence took place, namely, an unusual fall of rain; but the same effect did not follow, for one overlooked condition to give this rain its miraculous power was absent, a supply of food.

We come now to the epidemic of 1817, 18, and 19, which nearly equalled the preceding. If the population of Ireland at that period be reckoned at six millions, "it will be no exaggeration to state, that one million and a half of persons suffered from an attack of fever in the time included between the commencement of the year 1817, and the middle of 1819; of these, at least 65,000 died, and of the upper ranks in society attacked, at least one-third perished. In the course of two years, commencing with September 1817, in Dublin alone, more than 42,000 patients were received into hospitals, giving one-fifth as the apparent number of those attacked, but the number of sufferers in reality very far exceeded this; for it will be no exaggeration to say, that at least as many more went through the fever in their homes.

This epidemic bore a very striking resemblance to that of 1798. In duration there was a difference of two years, and in the duration of the cause, famine, we find a corresponding difference. The epidemic of 1798 lasted nearly four years; want from deficient crops prevailed just so long, commencing with the bad harvest of 1797, and ceasing on the gathering in of the abundant crop of 1801. The epidemic of 1817 lasted but two years. Want began to be severely felt after the bad harvest of 1816, and disappeared on the coming in of the abundant crop of 1818.

These are convincing proofs that the causes of these epidemics have been famine. We find not alone that of all the circumstances attending them famine has been the condition never failingly present, and therefore to be marked as the paramount cause; but we find that fever has endured just so long as famine, and that when the latter has ceased the former has quickly disappeared. When we find two objects, the one invariably following the other, we put them down as cause and effect. This is all, in any instance, that we know of the connexion between them, and the connexion between famine and fever is just as close as between any other two objects that are designated with universal admission by these names.

It is scarcely necessary to call to the recollection the summer of 1816, cold and wet —corn uncut in November, or rotting in the sheaves on the ground; potatoes not ripened (and when unripe there cannot be worse food), containing more water than nutriment; straw at such an extravagant price as to render the obtaining of it for bedding almost impossible, and when procured, retaining from its half-fermented state so much moisture, that the use was, perhaps, worse than the want of it. The same agent that destroyed the harvest spoiled the turf. Seldom did such a multiplication of evils come together. In some of the former years, although food and bedding were deficient, the portion saved was of good quality, and fuel was not wanting; but in 1816 every comfort that might have atoned for partial want was absent. This description applies to the two years of 1816 and 1817. At midsummer of 1817 the blaze of fever was over the entire country. It had burst forth almost in a thousand different points. Within the short space of a month in the summer of 1817, the epidemic sprung forth in Tramore, Youghal, Kinsale, Tralee, and Clonmel, in Carrick-on-Suir, Roscrea, Ballina, Castlebar, Belfast, Armagh, Omagh, Londonderry, Monastereven, Tullamore, and Slane. This simultaneous breaking-out shows that there must have been some universal cause.

Although the bursting forth of fever about the same time in all the places mentioned above, made this the most remarkable epoch from which to designate it a general epidemic; it had commenced through the greater part of Connaught in the autumn of 1816, anticipating its appearance in the other parts of the country by at least six months. This fact, on calling to mind the peculiar circumstances of the province of Connaught, affords further confirmation of the opinion advanced that famine and fever are related as cause and effect. In Connaught the bulk of the people are more dependent on the immediate crop of the year, and especially on the potatoe crop, than in most other parts of Ireland. Hence want immediately ensues on the occurrence of an unproductive harvest. No sooner, therefore, in the autumn of 1816, was famine felt from the deficient crop than pestilence followed, raging with great violence through the country parts of the pro-

vince. But while the country parts, at this early period of the epidemic, were suffering severely, the thriving towns of the province, for example, Westport and Castlebar, were free; and it was not until six months after, towards Midsummer of 1817, when distress and want became general, that these towns in common with others began to suffer any considerable extent. If the epidemic had depended for its rise on and progress on climate, season, atmospheric influence, or contagion, these towns should have suffered in common with the parts immediately around them. They possessed for some time, at least, one immunity which their more inland and less thriving neighbourhoods wanted, an immunity from famine, and in the same degree they enjoyed it from fever.

Another part of Ireland furnishes a similar example of the power of a supply of food in keeping off epidemic fever. When distress and want had become even very general, the inhabitants of Wexford and Dingle enjoyed comparative abundance from the fisheries, and the latter town from a flourishing linen trade in addition. In these two towns epidemic fever was later by a year than in other parts of Ireland. *

As we continue our review, we find supplies of food still warding off fever. In Dublin the epidemic was later in its appearance than in any other part of Ireland. The distress of the poor came more immediately under the observation of the opulent. The rich, greater in proportion in their number than in the country, came forward freely, and contributed largely to relieve the sufferers. Almost as soon as the effects of the bad harvest of 1816 were perceived, employment was provided for the poor. A committee was selected from the humane and wealthy of the city, called, from their place of meeting, the Mansion House Committee. By their exertions, the evil effects of want were comparatively but little felt in the city, and fever was kept at a distance. Dublin was thus, by active exertion, circumstanced as the towns in Connaught already described, and it was not until the occurrence of the second bad harvest, that of 1817, that the epidemic appeared in the capital. Fever was now, September 1817, universally diffused over the country, and continued unabated until the autumn of 1818, when a fine harvest brought an abundant supply of good provisions. Just at this time, immediately on the people being supplied with food, the epidemic began to decline in the country parts, in Connaught especially; while in other places, as Dublin, where it was necessary to the removing of want that trade should revive, its decline was later, commencing in a marked manner about April, 1819.

We have in this epidemic, fever following famine as closely as effect can follow cause, in every instance the appearance and prevalence of the one, a correct indication of the commencement and an accurate measure of the extent of the other.

The next epidemic worthy of note, is that of 1826-27. The table, at the head of the article, gives a correct view of its rise and progress. Certainly not more than one half of patients visited with fever seek the accommodation of a hospital, so that the dispensary report gives the more accurate return.

It will be readily remembered, that the summer of 1825 was very unproductive. The great drought checked the growth of all crops. Potatoes were particularly deficient. In the commencement of the winter, by a sudden reverse of trade, more than 20,000 weavers in the liberty were thrown out of employment. Epidemic fever appeared. Distress of the people increased during the summer, so did fever, and about the middle of the following winter, 1826-27, when distress had reached its acme, fever had attained a height unprecedented in 1817 or 18.

The stagnation of trade, the want of food, and the extent of disease, being immediately under their inspection, made a strong impression on the wealthy. Subscriptions poured in. At the commencement of the winter of 1826-27, plans were brought into effective operation, which afforded a sufficient supply of wholesome and nutritious food. The good effects were soon apparent. Fever quickly after began to decline. In the spring of 1827, the number of fever cases was very much lessened, and before the middle of summer the epidemic had ceased to exist, in little more than twelve months after its commencement. Here, as in every former instance, we have epidemic fever appearing after the approach of want, corresponding with its extent, and vanishing with its removal.

A measure dictated by the purest motives of benevolence, but followed by disastrous consequences, was carried into operation at this period. When subscriptions were collected for the relief of the weavers, it was agreed on all hands that they should not be supported in idleness, and that however unproductive the result, they should be employed at some kind of labour. It was decided that they should be turned to some labour foreign from their own, in order to allow time for the consumption of the stock on hand, that a want might be thus created, which it was hoped would bring them back again gradually, but surely, to their own trade.

* Vide Barker's and Cheyne's report.

This is not the place to discuss the merits of the principle which dictated the measure, or to point out its fallacy, but only to allude to the physical effects that followed it, as a caution against the adoption again of such a course.

The weavers were men constantly confined to a sitting posture, in close rooms of an uniform temperature, their bodies ill adapted to meet any change of temperature, or to bear with impunity external impressions that may be disregarded by those whose lives are passed in the open air. Their trade was such as to bring only certain muscles into action, leaving unemployed, and of course rendering feeble, those muscles which are required in other kinds of labour.* They were thus, from confinement, from the temperature in which they lived, from the posture in which they worked, from the very manipulations of their trade, the worst prepared perhaps of the community for a transition in their mode of life, or a change in their habits of labour. It need scarcely be observed, that those tradesmen (at least many of them) had passed the greater portion of long lives in the circumstances described, and it will not therefore be wondered at, that they should have fallen "like shrubs beneath the poison blast," when taken from their former way of life; they were sent, under the additional privations—want of food and despondency of mind, in the commencement of winter—to break stones upon the public highways.

Attention, which had been heretofore bestowed on depressed trade and want, was now turned to meet overpowering pestilence. Among the measures adopted, soup-kitchens were established in most parishes of the city. The convalescent after leaving hospital, and those on dispensary lists who had gone through the disease in their own homes, were supplied with food. The good effects were soon apparent. In the spring of 1827, the epidemic began to decline. Providence blessed the country with a most productive harvest, and in less than a year from its commencement, this epidemic that had threatened, from the suddenness with which it arose, and the rapidity with which it progressed, to surpass all former visitations, had disappeared.

[The remainder of this valuable paper will be given in our next Number. We have to apologize to Dr. Corrigan for the length of time that it has been in hand, but from what is now passing in Ireland, it could scarcely have been published at a more opportune period than the present.—Ed. L.]

* Muscles of the spine for example. Hence we find weavers in old age more stooped than labourers.

ON PRUSSIC ACID.

By Mr. Abraham Booth, *Experimental Chemist.*

I have often found in my experiments upon prussic acid, both as obtained in commerce and my own manufacture, that the quantity of real acid present may vary very considerably, and that whilst a specimen may possess the peculiar physical properties of the more concentrated acid, it may yet be found to contain but a very small proportion of the substance.

Strength.—That the variable reports of the doses of this medicine owe their rise to something more than the peculiar idiosyncracy of certain constitutions, appears very certain, when we consider the above fact. *The specific gravity* of the acid is no certain criterion of its strength, as in proportion as that *increases*, so in a greater ratio does the quantity of real acid *decrease*. The range of the acid met with in commerce by Dr. Ure, and what I found by my own experiments, may be stated as follows:—

Dr. Ure.		Mr. Booth.	
Sp. Gr.	Real Acid per cent.	Sp. Gr.	Real Acid per cent.
·9958	3·	·9979	1·63
·9964	2·7	·9980	1·55
·9967	2·5	·9981	1·39
·9970	2·3	·9983	1·22
·9973	2·1	·9985	1·07
·9974	2·0	·9987	·75
·9975	1·77		
·9978	1·68		

It will thus be found that in this short range the quantity of real acid will vary from 3 to ·75, or one-fourth.

Doses.—The very uncertain activity of this medicine, therefore, requires some specific and ready test by which the practitioner may know how to *apportion his doses*. None can be more easy and certain than that proposed by Dr. Ure, being the quantity of per-oxide of mercury (red precipitate), which a certain quantity of this acid will dissolve. From the relation of the equivalent numbers of these two substances, being one to eight, and the salt in its dry state being a bicyanide, we have a proportion of one to four in the formation of the salt, and hence derive the following simple rule of analysis. To 100 grains of the acid contained in a small phial or test tube, add in succession small quantities of the peroxide of mercury in fine powder, till it ceases to be dissolved on agitation. The operation may always be completed in five minutes, as the red precipitate dissolves as rapidly in diluted prussic acid with the aid of slight agitation, as sugar dissolves in water. The weight of the red precipitate taken up being divided by four, gives a quotient representing the real quantity of prussic acid present. By weighing out be-

forehand on a bit of paper or a watch-glass, forty or fifty grains of the per-oxide, the residual weight of it shows at once the quantity expended.

Adulterations.—Prussic acid is, however, often contaminated with muriatic acid, which may very much modify the results of the last experiment. Nitrate of silver, in common cases so valuable an agent for detecting muriatic acid, is here of no avail, as it gives with prussic acid a flocculent white precipitate, soluble in liquid ammonia, and insoluble in nitric acid, and which may be mistaken by common observers for the chloride of that metal. In this case, the volatility of prussiate of ammonia compared with that of muriate of ammonia, may be had recourse to with advantage. We must add, therefore, ammonia in slight excess to the acid, evaporate to dryness at a heat of 212 degrees, when the prussiate of ammonia will exhale, and the quantity of muriatic acid present may be known by the residuary sal ammoniac. Should the absolute quantity present be required, it may be known by decomposing this salt with the nitrate of silver, and ascertaining the quantity of chloride present. In the performance of these nicer experiments, I have found that the quantity of ammonia present in distilled water, if not obviated by its being neutralized with nitric acid, will materially affect the results of the experiments; and the want of sufficient attention to this circumstance, has, I apprehend, caused much of that discrepancy which exists among chemical writers, particularly in their experiments, to deduce the atomic composition of certain bodies. Care must also be taken that the red precipitate be pure. If well prepared, it will wholly volatilise with heat. It is rarely sophisticated, but will generally be found to contain a little sub-nitrate of mercury, which will, however, interfere with the accuracy of the experiment, although not sufficiently in a common investigation. I therefore prepare the peroxides, by washing it well previously with distilled water, and drying it at a gentle heat.

This test will also be found both useful and simple in ascertaining the strength of some other acids, which the scientific practitioner will readily appreciate.

Probably no formula for the preparation of prussic acid will ensure the uniform composition of this substance; I therefore recommend to manufacturers of this article, the examination of every sample before it is sold, and to be specified upon the labels the quantity of real acid present. By this means alone, may the practitioner be supplied with a certain and useful as well as a dangerous preparation.

95, Shoe-lane, Fleet-street,
June 24th, 1830.

EXPERIMENTS WITH PRUSSIC ACID.

To the Editor of THE LANCET.

SIR,—The manner in which you have always discussed and laid before your readers the various discoveries connected with the profession, induces me to forward to you the results of several experiments performed with the above substance, by myself and a scientific friend. We made our own prussic acid from the ferro-prussiate of potass, and I should state that it was of such a strength that the inspiration of the fumes in a large room occasioned vertigo, and a tickling sensation in the larynx.

1. We administered to a full-grown male cat, one minim of the acid upon the tongue; violent convulsions were produced, with an intermitting pulse. We gave another minim in five minutes, which again induced convulsive writhings of the body, terminating almost immediately in death. This experiment was made to try the strength of the acid. On opening the cat we found extravasation of blood on the brain, and the lungs highly inflamed.

2. I gave to a kitten six weeks old, one minim of the acid, which in half a minute inflamed her tongue considerably. The dose was immediately followed up with a strong solution of tartrate of potass; convulsions ensued, and the kitten was apparently dead. In five minutes, however, she manifested reanimation. I now gave it a drachm of a saturated solution of tartrate soda, repeating it at short intervals. The kitten repeatedly evacuated fæces; in six hours it walked about, though extremely weak, and in twelve hours the acid had lost its effect.

3. To another kitten about the age of the preceding, we administered one minim of prussic acid *without the remedy*. This animal died in a minute and a half.

4. Made a slight incision on the back of a kitten, and inserted one drop. Violent convulsions followed. I gave a strong solution of tartrate soda and potass (equal parts of each), at short intervals, till the kitten recovered. She is now quite healthy, and the cicatrix has perfectly healed.

5. I poured on the tongue of a large dog about six years old, eight drops of the prussic acid, and instantly exhibited two drachms of a saturated solution of tartarised soda and tart. potass. In ten minutes I gave *ten* drops more in the same saline liquor. In one minute convulsions came on, with (as in the other instances) an intermitting pulse, followed by fæcal evacuations. Twenty drops of tinct. opii instantly revived him, and he vomited copiously. Administered:—

Sodæ tart. ℥ij
Aquæ distillatæ ʒv; and three minutes

afterwards he appeared *quite well*, having taken *eighteen* drops of this potent poison.

I then made a slight incision on his back and dropped into it five minims of the acid. Great uneasiness and tremors followed, with wandering glances of the eye, and winking of the eyelids for several minutes. Dropped eleven minims more into the incision, repeating frequently the solution of tart. soda and tart. potass. In six minutes he had again *perfectly recovered*. Two or three hours afterwards, as we wished to examine the state of the viscera, &c., we administered three drops alone, for the purpose of killing him. He died in *one minute and twenty seconds* after this dose. The brain and lungs presented the same appearances as in the preceding experiments.

6. Gave to a horse that had broken his leg, ʒiss of the acid, and found in his stomach about five ounces of mucus, which left a dark-brown patch on removal. There was extravasation of blood on the brain, and the lungs were found inflamed.

By following up these experiments, we may be enabled to say how much of the salt will neutralise the acid, though much depends on the quantity and strength administered of the latter. We have made various experiments with ammonia, &c., but nothing besides the antidote above mentioned answered the purpose.

I have the honour to remain, Sir,
Yours obediently,
C. B. Garrett,
(Studiosus Medicinæ).

Hanley, Staffordshire Potteries,
June 21, 1850.

CHARGES FOR ATTENDANCE ON "CHARITY" PATIENTS.

A Correspondent under the signature of *Junius*, whose real name and address we have also received, makes the following complaint against a "Dispensary surgeon for charging for his attendance upon a poor woman." The "Dispensary," he states, is carried on in one of the parlours underneath the Eye Infirmary of Mr. Guthrie, in Warwick Street, Golden Square, by a Mr. Laidlaw, with the professed object of affording "gratuitous attendance to poor lying-in women at their own houses, and for the diseases of children." The *real* object of the "Institution," it appears, is the instruction of students in the practical duties of the accoucheur. These gentlemen he sends to the poor females to learn the obstetric art as they best may, but whenever a patient requests the attendance of "the master accoucheur himself," that gentleman informs them he is never in the habit of affording it unless he be paid for his trouble, although he is always willing to "book the patients" for his dispensary pupils. A woman, who a fortnight previous was attended by a student, thought at the time that she had been unscientifically delivered. The child had died, the woman was attacked with inflammation of the abdomen, and she became unwilling to be again placed under the hands of a pupil. She sent, therefore, to Mr. Laidlaw, requesting him to visit her, at the same time stating that she would pay him for so doing, if he made a moderate charge. Mr. Laidlaw, upon this promise, attended and repaired the mischief which had been previously done, and a few days after SENT IN HIS BILL.

INSANE POOR.

It appears by returns lately made to Parliament, which have just been printed by order of the House of Commons, that the number of pauper lunatics and idiots in the several counties of England and Wales, amounts to very nearly ten thousand, 5145 of these being females. By adding to this number, the amount of lunatics ascertained to be confined in public or private asylums, and those in the army and navy, a total of 13,663 is produced,—a mass which, according to the calculations of Sir Andrew Halliday, is three times greater than it was twenty years since. The judicious and humane disposal of such a large and increasing body of paupers, demands and must obtain, through the interference of Parliament, or the benevolence of the wealthy, a more considerate attention than mere parochial care will bestow on them, and this in some counties it has received. In several of them, public lunatic asylums have been established, and have proved highly economical and advantageous, particularly in consequence of the facilities they have afforded for the *early* treatment of the malady. The following statements, extracted from the reports of the Armagh and Wakefield Asylums, furnish a marked confirmation of the benefits resulting from attention to cases of lunacy, while the attack is recent. In the former, within the last year, of 32 old cases admitted, only one recovered. In the Wakefield Asylum, of 44 cases admitted in which the first attack had taken place within the three months, 28 were cured within six months; and of 23 cases of twelve months standing, nine were restored within two years from admission. We perceive by the pamphlet of Dr. Palmer, a magistrate of Devon and Somerset, that the establishment of a pauper lunatic asylum in the former county also, is under serious consideration, and will probably be carried into effect.

THE LANCET.

London, Saturday, July 10, 1830.

The circumstance of Sir Astley Cooper's non-appearance at Windsor Castle, until after the demise of his late Majesty, has given rise to a great variety of contradictory reports. Without doubt, his absence was owing to that invisible influence, which, for several years past, has characterised the dark manœuvres of a certain individual who was lately high in office, and, had not the charm been broken, the conjuror, we believe, would have extended his pernicious power, and prevented the presence of Sir Astley Cooper at the *post-mortem* examination. The Lord Chamberlain, in the discharge of his duty, unawed by the mere wreck of surreptitiously-acquired authority, "summoned" Sirs Astley Cooper and Everard Home, the sergeant-surgeons to his late Majesty, in order that they might institute the fullest inquiry into the causes which led to the late lamented catastrophe. The stupid bulletins had given birth to strange rumours; the mystical secrecy scrupulously observed within the palace, relating to every thing connected with his Majesty's disease, created many alarming suspicions, and nothing was better calculated to dissipate the doubts of the profession, and calm the apprehensions of the public, than to intrust the conduct of the *post-mortem* examination to Sir Astley Cooper. It was a step marked alike by excellent taste and sound judgment, and it was impossible that a report, written exclusively by the signers of the "treacherous" bulletins, as Mr. Brougham designated them, could have been received with feelings other than those of deep-rooted distrust. An examination conducted by the skilful hand, and under the scientific eye, of Sir Astley Cooper, gave to the public the strongest assurance, that the report would contain an accurate and elaborate account of the morbid appearances; and accordingly, with one or two exceptions, Sir Astley's statement of facts must be regarded as perfectly satisfactory. But in proffering his opinions, although evidently with the best motives towards the medical attendants, he has exceeded the bounds of his duty, and has invited a species of criticism which cannot prove agreeable. We marvel much that the worthy Baronet, whose penetration and knowledge of the world are proverbial, did not perceive that no friendly flourish of the pen, however ingeniously executed, could exculpate those upon whom the hand of fate had affixed the seal of self-condemnation. The bad-night—better-night—good-night—embarrassed-bulletins, had indicated too clearly, at least we should have supposed so, the spell by which their writers were bound, to have escaped the notice of so shrewd an observer as Sir Astley Cooper:—

> "Quem Deus vult perdere, prius dementat,"

And, surely, nothing less than the last struggles of insanity could have prompted the "signers" to rely for support upon an old, worn-out, miserable, foundered hack, in the expectation that so feeble a brute could have carried them harmless and unsullied through the mire, into which they had plunged, through their own blindness, and the influence of the misleading wand of the magician. True, there is one "symptom" of returning mental integrity in the royal medical junto. The miserable animal selected to bear the burden of their disgrace, is now disclaimed by them, and the base hack, after having laboriously worked in his dirty vocation, sees itself disowned and despised, and has been compelled, under invisible influence, to bray to the tune of its own sycophancy and knavery. Sir Astley Cooper, finding the unfortunate position in which his invisible colleagues were placed, from having directed their

tool to make certain diagnostic and prognostic announcements, endeavoured by a little, probably justifiable, sophistry, to shield them from a certain portion of disgrace. Accordingly, some of the facts and opinions in the report, have been framed in such a manner as to bear the appearance of agreement with the previously published diagnostics, and prognostics, of the royal medical junto. The facts, however, as we before stated, are upon the whole honestly set down by Sir ASTLEY, and they prove, to a great nicety, the wondrous diagnostic tact of the signers of the bulletins. We select an example :—

HACK *of the bulletin signers.*

June 26, 1830.

CONSIDERABLE PORTIONS of the LUNGS are CONSOLIDATED!

This was a part of the diagnosis published on the very day his late Majesty expired. Shades of AVENBRUGGER and LAENNEC!—Rest in peace.

Alarmed at this fatal exposure, the poor HACK is made to declare, in terms the most unqualified, that the signers of the bulletins have not added to their disgrace by holding any communication with him on the subject of the King's illness. Hear the whine of the unfortunate creature:

"We beg most unequivocally to state, that no part of our information,—(Information?—Consolidated lungs, blockhead,)—or of the opinions which have been expressed in this Journal, were (was) communicated to us, either directly or indirectly, by any part of his late Majesty's professional attendants,—except, however, our contradiction of the assertion, that Sir M. Tierney had signed the bulletins without seeing the King."

The Editor of *The Times*, in extracting the article from which this passage is taken, at once gave the lie to the slavish poltroon, in the following words :—

"The writer is EVIDENTLY some person *connected* with the physicians."

Enough! The last paragraph but one of the report was apparently written by Sir ASTLEY, with a very kind professional feeling, but it is exceedingly infelicitous in all its parts.

"The original disease of his Majesty," says Sir Astley, "consisted in the ossification of the valves of the aorta."

Sir A. COOPER'S *report of the* post-mortem *examination.*

June 27, 1830.

The *substance* of the *lungs* had undergone NO CHANGE OF STRUCTURE.

Now upon what authority is it to be found that ossific or calcareous deposits are *original* diseases? On the contrary, are they not as decidedly *effects* of diseased action, as are watery effusions into the pleuræ? Are the calcareous deposits in the hands and feet the causes or the effects of gouty or arthritic inflammation? Fie, fie, Sir ASTLEY! You never told your pupils, in your truly invaluable lectures on surgery, that a chalkstone was the cause of gouty inflammation.

It is next stated, that,—

"This ossification of the valves of the aorta must have existed for many years, and by impeding the passage of the current of blood flowing from the heart to other parts of the body, occasioned effusion of water into the cavities of the chest, and into other situations."

Let us inquire, Sir ASTLEY, why, if ossification of the valves was the original disease, these effusions did not take place many years ago; for you say the valves had been in this state for many years. After having seen that lungs which had been condemned as "consolidated" had undergone "no change of structure," we can believe the otherwise incredible fact, that his Majesty's physicians were not sufficiently acquainted with the symptoms of diseased valves of the aorta, to discover that those valves were ossified. But even admitting that they *were* acquainted with that effect, it is not quite clear that its cause was very familiar to them. If the worthy Baronet

will presently take the trouble to read an account of a case taken from the work of Dr. Ayre, a really valuable book, he will see that "dropsical effusions," as they are termed, may take place independently of "ossified valves;" that these effusions are the more common results of inflammatory action, and that bleeding is the remedy. We knew all along, indeed, that his Majesty was afflicted with disease of the heart. Still, we more than once remarked, that immediate dissolution was not inevitable, because we were of opinion that the recent effects of the inflammation could have been controlled; in fact, that the inflammation itself might have been removed. In truth, Sir Astley's apologetical paragraph for the signers of the bulletins, does no credit to his pathological and literary acumen. It savours of invisible influence.

The last sentence of Sir Astley's report runs thus:—

"The immediate cause of his Majesty's dissolution was the rupture of a blood-vessel in the stomach."

If the ruptured vessel were sufficiently large to admit of such a flow of blood as to prove the cause of death, why is not the name of the vessel mentioned? Besides, this plethoric state of the arteries is not quite consistent with the fact of the "impeded circulation through the aorta, in consequence of the obstacle arising from the ossified valves." Was not the hæmorrhage another effort of nature (fatal indeed) to diminish the overcharged condition of the circulating system? Her efforts in the way of relief had several times been powerful, and showed, as the noble Premier well expressed it, that there was, to the last, "much of vitality in the King;" a large quantity of water became absorbed, and was discharged through the natural channel; there was profuse secretion of mucus from the lining membrane of the air-passages; the obstruction in respiration was frequently much diminished, and the wounds formed by the scarifications and punctures, exhibited an action so decidedly inflammatory, that they healed with the greatest rapidity, and were with difficulty kept open sufficiently long to accomplish the object for which they were made. All these circumstances show, that there was much power of constitution, and the discharge of blood into the stomach and intestines was, probably, another of nature's efforts to procure relief for the overcharged heart and inflamed lungs.

"The mucus membrane lining the air-tube," says Sir Astley, "was of a dark colour, in consequence of its vessels being turgid with blood."

An additional proof that local, if not general, bleeding might have been resorted to with safety and advantage. The ossification of the valves, we are told, had existed for many years, and it is not in the nature of this affection to undergo any change for the better, after it has once been established. But were not his Majesty's symptoms exceedingly variable,—evidently depending upon at least one cause, that was subject to frequent change? It will be recollected, that when the mucous membrane of the air-passages had in some degree become relieved from congestion by the expectoration of mucus, his Majesty's respiration became so free, and was performed with such comparative ease, that the signers of the bulletins acknowledged they were puzzled, and there was a general expectation, in the court circle, that his Majesty would recover. For the first few days after the expectoration of mucus, the difficulty of breathing that remained depended probably entirely upon the irregularity of the heart's action.

Taking any view of the case, depletion was evidently demanded from the first,—a remedy which Mr. Wardrop,—who cannot be too highly commended for his accurate and scientific diagnosis,—advised, when he was consulted by his Majesty on the 28th of March. Mr. Wardrop was too well versed in the true principles of pathology,

and physiology,—in a word, he was too philosophic a surgeon to feel any dread from abstracting a few ounces of blood, because there was a "weak pulse," and "dropsical effusion." The signers of the bulletins, however, appear entirely to have forgotten, if they had ever any knowledge of such things, that a pulse may indicate great feebleness and exhaustion from an overloaded state of the heart, and that "effusion" of water into the serous cavities of the body may be the result of inflammatory action.

The following report, extracted from the able work of Dr. AYRE,* will afford the reader some notion of the advantages which the royal sufferer *might* have derived, had the treatment been adopted, which was so judiciously recommended by Mr. WARDROP.

"DROPSY OF THE CHEST AND BODY WITH ANASARCA.

"In March I was requested," says Dr. Ayre, "to meet Sir P. M'Gregor, in consultation, on the case of a gentleman in the commander-in-chief's office, whom he had attended for some time, and who was labouring under a dropsy of the chest and body, and an anasarcous state of the legs and thighs. The patient was fifty-seven years of age, of a corpulent habit, and had mixed much in society, and partaken in the usual pleasures of the table. During the previous two years, he had been affected with several premonitory signs of his disease. His feet and ancles had generally swelled towards evening, and only partially lessened in a morning; and his breathing became short upon attempting to walk quickly, or on ascending a stair. Whenever he took cold, his breathing became affected, being troubled sometimes with a severe cough, and he was obliged at these times to lie in bed, with his head and shoulders raised. In some of these attacks he had been bled, with partial relief, and latterly he had taken less wine than he had been used to. The habitual difficulty of breathing, had, however, continued to increase, and exercise on foot had nearly become impracticable with him. About a fortnight before my seeing him, his complaints had become greatly aggravated, particularly his difficulty of breathing, and the dropsical swellings had now extended to the whole of the lower limbs. The following are the symptoms under which I found him labouring:—A great sense of tightness in the chest; the breathing habitually difficult, so as quite to preclude his lying down; the countenance of a purplish hue, particularly the lips; the mind at times slightly wandering; the body considerably enlarged, and yielding a distinct feeling of fluctuation; the pulse about 90, and intermitting; the bowels torpid; the urine very scanty; some thirst, and the appetite almost gone. He had likewise a tickling cough, with a mucous expectoration. His nights were passed in a nearly sitting posture, and his sleep was disturbed by terrifying dreams. The lower limbs were greatly swelled, and the legs were peculiarly hard, and inflamed on their surface. I found him, in fact, labouring under the complicated forms of dropsy of the chest and belly, with an anasarcous swelling of the lower extremities; and so alarming was his state, that a fear had been expressed to the patient's friends of his not surviving many days.

"From the history above given, which I procured of this gentleman's disease, and of the causes which produced, or increased it, there was, to my judgment, a satisfactory proof of the existence of inflammation in the serous tissues of the chest and body, and a slow effusion, as the consequence, going on into these cavities; but at the same time it seemed probable, that if the patient could outlive the immediate effects of the fluid already effused into the chest, that means might be used to prevent any further effusion; whilst the water already collected might be removed by a proper course of medicine. The inflammatory action was the true disease, the effusion of water being its effect; and although this, its effect, was the main cause of the imminent danger, yet the increase or continuance of the cause, as leading to an increase in the effusion, was the primary object to be attended to. We began our treatment by having twelve ounces of blood taken from the chest by cupping, to be followed by a blister on the breast, and a drastic purgative to be taken, and afterwards some diuretic medicine every three hours; the patient's diet to be vegetable, and he was to abstain wholly from the use of wine and other fermented liquors.

"At our visit the following day, we found that some slight relief had been afforded by the cupping, and that the pulse was somewhat softer. In other respects, the symptoms remained the same. A second cupping was ordered, and the other means to be continued.

* Pathological Researches into the Nature and Treatment of Dropsy. By JOSEPH AYRE, M.D. 8vo,

"At our next visit we learned that the tightness about the chest was sensibly lessened, and that he could breathe more deeply; the other symptoms as before. The drastic purgative was to be repeated, and the other medicines continued.

"In the course of the following three days the cupping was repeated, and with farther relief, and the quantity of the urine was somewhat increased.

"In the course of the succeeding week, our patient was again cupped to the extent of eight ounces; the drastic purgative was repeated twice, and the other means continued—occasioning the urine to become increased in quantity, and the breathing so improved that the patient was enabled to lie in a somewhat recumbent posture.

"During the following week another cupping was employed, and occasionally a drastic purgative was given, and the same treatment, under a slight variation, continued. The urine became abundant; the breathing more free, and the body much lessened, and the fluctuation no longer perceivable. In the next ten days there was again a cupping to eight ounces, and a purgative dose of the supertartrite of potash given each morning. Notwithstanding these evacuations, the patient's strength had not declined, and he had in all other respects greatly improved. In the course of the following ten days, the patient underwent a slight relapse from an accidental exposure to cold, and he was twice cupped during that time, and a blister was applied to the chest. The cough and difficulty of breathing readily yielded to these means, and he progressively advanced in his recovery.

"During the following fortnight, he was cupped once at the back of his neck, with the full effect of removing some fulness about the head, as shown by a great degree of drowsiness, and an evident failure in his judgment and memory. Wine had been suggested and tried, on the supposition of these symptoms arising from debility, but with evident injury, and they only yielded after having recourse to the cupping.

"From this period our patient progressively improved, and he was only cupped once during the succeeding three weeks, and this chiefly as a precautionary measure. All appearance of the dropsy, either of the chest or body, had entirely disappeared. The swellings of the thighs also had yielded to the use of the general means; but the legs, from the knees downwards, continued swelled, and they retained their great hardness and erysipelatous redness.

"Our patient was told that this swelling arose from debility, and would subside as he regained his strength. They had, however, swelled when his strength was entire; and his feet and ancles had been swelled during the preceding two years; and the swelling of the thighs, which had occurred in common with that of the legs, had subsided in common with the effusion into the cavities, by means of cupping, and the other evacuant measures; nor was the patient weaker at the end of ten weeks, than he had been at the commencement of this treatment. Bandaging was suggested. By many, puncturing the swelled limbs, to let out the fluid, would have been adopted, to be followed, perhaps, and, most probably, as I have several times witnessed, by inflammation and gangrene of the parts. The swelled state of the legs depended, in this, as in the other cases, upon the presence of inflammation in the cellular tissue; but was too local to yield to any thing but a local treatment. This treatment consisted in keeping the legs constantly wet with a cold evaporating lotion, applied by means of a strip of muslin. We had the girth of the legs measured before commencing with the plan. At the end of the first twenty-four hours there was no perceptible decrease of the swelling. At the end of the second day a decrease was produced, and on each succeeding day a progressive lessening and softening of the enlarged limbs ensued. At the end of a fortnight the legs had entirely recovered their former natural size and softness, and *after three years they still retain them*. On two or three occasions, indeed, a temporary swelling of them has occurred, accompanying a recurrence of the pectoral attack; but they both yielded readily to the treatment respectively employed before for them. Of the patient's state, generally, it is gratifying to add, that, since the period when he first recovered, he has continued, with the exception of these slight and temporary relapses, to improve into a state of health that may be termed robust, and that for several months past he has continued free from every trace of his former disease, having taken at times much active exercise on foot; frequented freely the places of public amusement, and mixed in the evening parties of his friends; and, although for a period of forty years he had been accustomed to the daily use of wine, he has for the last three years entirely abandoned it, and enjoys his health and strength, and an undiminished flow of spirits, with no other beverage than water."

As we are much pressed for space, we must reserve a few remarks upon the excuses of the junto, for publishing such brief and "treacherous" bulletins, until our next number,

SEATS IN PARLIAMENT
FOR
MEMBERS OF THE MEDICAL PROFESSION.

This subject, from the notice which has been taken of it from time to time, in the pages of this Journal, appears, at last, by the mere weight of its importance, to have forced itself on the attention of the great mass of the profession. Parliament is about to be dissolved, and this is the moment for those medical gentlemen who may happen to have influence among the freeholders of the counties, and the electors of open boroughs, to exert themselves, day and night, in furtherance of the cause of MEDICAL REFORM. The miserable louts who will, here and there, offer themselves for counties, should be most strenuously opposed, the length of their purses being their only claim to support, as nothing either learned or liberal can ever be expected from them. They are the thick-and-thin supporters of every species of corruption, and would be the last to aim a blow at the rotten medical corporations. We hope, that in the forthcoming struggle, SURGEONS will be every where found, at least where a just opportunity offers, to promote the election of gentlemen of character and talent, and of known liberal and independent principles — men who will always be found amongst the advocates of medical reform. If there be any *open boroughs*, and we believe there are many such, where the resident medical practitioners have sufficient influence with the electors to ensure the return of candidates of their own nomination, it will afford us much satisfaction to receive immediate communications from them on the subject, as we think we could name some gentlemen members of their *own profession*, whose return to the House of Commons would give a character, a life, and an importance, to medicine, which it has never yet acquired. If surgeons do but exert themselves on the present occasion, and refuse all connexion with the seat-trafficking, knavish attorneys, they may see accomplished, in a few years, all that they desire relating to medical legislation. There is already *one surgeon* in Parliament, and the indefatigable labours of that excellent, honest, and independent member, must induce all upright and intelligent electors to look with a favourable eye upon the claims of medical candidates. Mr. HUME is, in truth, an honour to the senate house; and it may almost be said, that whatever the people have of a House of Commons is to be found in him, and two or three others who are always working by his side in the cause of economy and retrenchment. This gentleman, we understand, will be nominated for Middlesex; and sure we are, that the members of the medical profession alone, if they bestir themselves, can secure his return.

UNIVERSITY OF LONDON.

THE proprietors held their Meeting in one of the theatres of the Institution, on Saturday last, agreeably to adjournment. Many noblemen and gentlemen of distinction were present, and, after a spirited discussion, a Committee was appointed, to inquire into the alleged differences between the Warden and the Professors. We are happy to perceive, that in the view we have taken of this subject, we are completely supported by the most influential of the speakers; particularly by Lord ALTHORP, Mr. BROUGHAM, and Mr. HUME. Lord ALTHORP observed, that "the Council, be it composed of whoever it might, ought to be supported, or that the University would be ruined;" and Mr. BROUGHAM remarked, "that those, who, by the exercise of their spite, were attempting to injure the Institution, should be disappointed; that it was the duty of the proprietors to yield to the Council the most unqualified support." All

persons who are interested in the welfare of this promising Institution, will look with much anxiety for the report of the Committee.

BAT CLUB.

It is expected, that an *extraordinary* general meeting of the BAT CLUB will soon be held. Sir WILLIAM KNIGHTON has been elected an "honorary" member, *vice* Mr. NUSSEY, resigned.

OPERATION FOR CONGENITAL CATARACT.

Dr. MAUNOIR, of Geneva, has lately performed this operation on a boy eight years of age, who had from his birth been affected with cataract in both eyes. The pupils, which were very sensible to light, had been dilated by extract of belladonna. Both eyes were operated upon on the same day, and by the same method, viz. keratodialysis. No unfavourable symptom followed the operation, and, after a short time, the fragments of the lenses having been completely absorbed, the patient had the full use of his eyes. The results of the experiments made upon him soon after the acquirement of his new sense, for the most part coincide with those obtained by Cheselden and Wardrop. The eyes required to be exercised for a considerable time before the individual could judge correctly of distance and form, and the difference of colours. He learnt, however, to form a correct estimation of the latter much sooner than of the former, and very often fell into mistakes, by drawing his inferences from colour extensively; thus, he took a piece of blue paper for a steel knife, etc.

A Manual of Descriptive Anatomy of the Human Body, and illustrated by Lithographic Plates. By JULES CLOQUET. Translated from the French by THOMAS KING, Lecturer on Anatomy at the Aldersgate Street School, &c. &c. London. Feuillet-Dumus. Leicester Square. 4to. Nos. 1, 2, 3, 4. 1830.

CONSIDERING the general reputation of Mr. King, his merits as a lecturer, and the long period during which he pursued his studies in France—under circumstances, too, which demanded a pretty intimate acquaintance with the language of that country—it is impossible, for a moment, to attribute this translation to him, since it betrays not only an imperfect knowledge of the French language, but great ignorance of anatomy, and is written in a style very different from that which might have been expected from an accomplished surgeon, and an eloquent lecturer. We are therefore compelled to suppose that it is the work of some junior pupil, and that Mr. King has very thoughtlessly suffered his name to appear on the title-page, without having once examined the work, much less taken any share in its composition. In support of this charge, we need but state, that the translation is throughout so exceedingly close and literal, that not only is all elegance of diction discarded, and every obscurity carefully preserved, but the idiom of the language is often violated, that the French terms are everywhere rendered literally, to the exclusion, in many instances, of the far more familiar and generally received English ones; and that, lastly, there is a very considerable number of errors, which could not possibly have been made by any one even moderately acquainted either with the language, or the subject of the work. These errors, it is true, occur chiefly in the first two numbers, but the other defects are equally conspicuous in all four.

The following are a few of the errors alluded to:—"The fluids or humours form the greatest part of the body, being in proportion to the solids, as 18 to 20, or thereabouts."—p. 1. The literal translation is, "form the eighteen-twentieths,"—that is, are in proportion of nine to one.

In speaking of the globules of the blood, it is stated that "their diameter is $\frac{1}{300}$m," meaning $\frac{1}{300}$ of a millimetre. This measurement should have been reduced to the fraction of an inch, for it is not to be expected that the reader of a translation would be acquainted with French measures. In pages 6 and 7, "*sentiment*" is translated "sentiment," instead of sensation; and "*parcourues*," "peragrated," instead of perforated or traversed. In the latter page also there is a manifest error in the original, viz. that all serous membranes are furnished with "fimbriated prolongations,"

which has been translated literally, without note or comment. At p. 13, "*dense*" is translated "thick," instead of dense or firm; and "*charpente*," "timber-work," instead of frame, &c. We have selected these at random, and not as being, by any means, the worst that could be found. In fact, similar errors occur in almost every column of the first two numbers, without including a considerable quantity of typographical errors, or at least such as may possibly be attributable to the printer. Why the French, as well as the English, text, has been printed, thus increasing the size and expense of the work, it would be difficult to say; the former can be of no use to a person who is not acquainted with the language, and to one who is, it could only serve to show more clearly the defects of the translation. As to the plates they are very good, and though one or two of the figures are not very faithfully drawn, they are, mostly, well executed on the stone; but in truth the work does not appear to us to have been much wanted here, and, with its present faults, is certainly very unlikely to succeed.

A Practical Formulary of the Parisian Hospitals, exhibiting the Prescriptions employed by the Physicians and Surgeons of those Establishments, &c. &c. By F. S. RATIER, M.D., &c. Translated from the Third Edition of the French, with Notes and Illustrations. By R. D. M'CLELLAN, M.D. Edinburgh. Buchanan. 1830. 12mo. pp. 260.

In addition to the formulæ employed in the hospitals of Paris, most of which are distinguished by arbitrary names not a little puzzling to the English student who hears them for the first time, this little work contains a concise account of those institutions, with brief sketches of the doctrines and practice of their principal medical officers, especially in reference to particular diseases; and, lastly, practical observations on a number of powerful and important remedies, as the recently-discovered vegetable alkalies, iodine, prussic acid, &c., showing the results of the experiments made with them by various practitioners of eminence. Although, therefore, being intended for the French hospital student, its use is chiefly of a local nature, it will not be altogether uninteresting to the English medical reader. We cannot, however, but think that the abilities of Dr. M'Clellan, who has executed his task on the whole in a very creditable manner, might have been better employed in the translation of some work of more extended application and general importance.

CASE OF ENLARGED SPLEEN OCCURRING WITHOUT ANY KNOWN CAUSE.

By WILLIAM THOMAS, *Esq., Surgeon, Pembroke Dock.*

M. H., a child five years old, has been affected with a general tumefaction of the abdomen, for the last twelve months. In the left hypochondriac and iliac regions there is a hard swelling which stretches across the umbilical even into the right iliac, where a perfectly defined edge can be readily traced. The enlargement extends downwards into the hypogastric region. She measures round the most prominent part, two feet two inches and a half. Appetite pretty good; bowels regular; dry hard cough; great emeciation; and she suffers much in general health. Finding mercury, the warm bath, &c., to have little or no influence on the disease, although given a fair trial, I now prescribed the iodine.

Oct. 3, 1829.

℞ *Tinct. iodini*, gtt. iij, sensim augen. dosem ad gtt. xv bis die.

℞ *Tinct. iodini*, ʒij;
Linim. saponis, ʒx, mft. liniment.

A tea-spoonful of the liniment to be rubbed over the tumour with gentle friction three times a day.

6. No alteration in the child, except that the circumference of the bowels is rather less.

Pergat in usu medicament:

℞ *Hydriod. potass.* ʒi;
Adipis suillæ, ʒi, m. ft. unguent.

Rub a portion, of the size of a common nut, over the swelling, morning, noon, and night.

10. The iodine begins to produce its unpleasant effects. The belly has lessened one inch and a half in circumference. Pain in the gland.

Intermittantur iodin. prorsus.

℞ *Pulv. aper.* ch ij, capt. nocteque mane.
Applicentur hirudines sex ad regio. abdominis.

18. The unfavourable symptoms of the iodine are removed, but since its omission the tumefaction is increasing. She now measures two feet two inches. The bleed-

ing from the leeches was with difficulty stopped, having continued more or less for three days, which weakened the child considerably. The whole body has assumed a blanched appearance.

24. The child having improved in general health, I ordered the ointment abovementioned to be resumed, but only to be used once a day.

Nov. 2. The belly is one inch and a half less than when first measured. The ointment must be again discontinued.

From this period the child gradually grew worse, rallying, however, when the iodine was omitted, and suffering on its being resumed, so that although it seemed to act on the tumour, yet it was ultimately obliged to be altogether abandoned. Her appetite failed, and griping pains took place, with a constant desire to evacuate the bowels, which, with cough, restlessness, &c., continued till the 20th of January, 1830, when she expired.

Sectio Cadaveris.

The body generally had an emaciated appearance, although the abdomen was much enlarged. On laying open the belly by a large crucial incision, the spleen appeared in a most conspicuous manner. It was immensely enlarged, filling the whole of the left hypochondriac and iliac regions, reaching across the umbilical into the right hypochondriac and iliac. It extended downwards into the hypogastric region, and weighed, when removed from the body, nearly three pounds avoirdupoise (the average weight of the gland in an adult is from eight to ten ounces). When cut into, it presented a firm texture not unlike liver, but of a darker colour, being evidently in a state of congestion. Its arteries and veins were much enlarged. The bladder was small, and its coats were greatly thickened. There were no adhesions, and the intestines were of a pearly whiteness, and without any inflammatory appearances. The liver and rest of the viscera were healthy. No other part of the body was examined.

Pembroke Dock, South Wales,
June 17, 1830.

EFFICACY OF THE CARBONATE OF IRON IN NEURALGIA.

By GEORGE HENDERSON, *Esq., Surgeon, Chirnside.*

ALTHOUGH the sulphate of quinine seems to be a very useful remedy in neuralgic affections of the face, yet as there are many poor people unable to pay for this expensive medicine, I would in many instances still prefer the carbonate of iron, particularly as it proves in many instances highly effectual, as the following cases will show:—

CASE 1.—R. Brown, a carpenter, about forty years of age, of short stature, and sallow complexion, had a severe attack of inflammation in the chest in the month of June 1829. On recovering from this disease, he was seized with tormenting pain in the right side of the upper jaw, the pain appearing to be more immediately fixed in an open space of the gum, left by the extraction of the second molar tooth several years since, though it often traversed the whole side of the face, extending upwards to the orbit. The poor fellow's anguish was extreme night and day, and in the paroxysms of his agony, he has frequently sprained his fingers severely, by grasping them together. Various remedies, as scarifying the gum, friction with camphorated spirits and tinct. opii, &c., were applied with little effect. A blister to the cheek relieved the pain slightly for a day or two, and after the blistered part had healed, a plaster of common tar, applied to the cheek, considerably lessened his sufferings, but the face became so tender and sore from this application, that it was abandoned. It should be mentioned, that the patient has for several years suffered from hæmorrhage proceeding from the side of the jaw affected; there is no particular orifice from which the blood issues; it appears to come from different parts of the jaw at once; there is no perceptible tumour or swelling there; the gums are a little spongy and flaccid, and the patient seems to be of a scorbutic habit; he loses about an ounce of blood every day. Astringent gargles have been used without benefit; indeed, when the bleeding is suppressed for a day, the pain is always increased. The blood appears to be of an arterial nature, but from what morbid condition of the parts it proceeds, I cannot hazard a conjecture. As the excruciating pain which the patient suffered induced me to believe that the affection was somewhat analogous to neuralgia, I gave the carbonate of iron in doses of ten grains thrice a day. Three days after the exhibition of this medicine, the pain had greatly subsided, and the patient felt comparatively easy. I then increased the carbonate to a scruple thrice a day, and at the end of a week all remains of the former anguish were completely removed. Two weeks after discontinuing the remedy, the pain renewed its attacks, and immediate recourse was again had to the carbonate of iron, after taking a few doses of which he was again relieved. The pain has recurred twice since, and the medicine has been again used with success; so that it appears that the affection is completely under the control of this excellent remedy. The continual bleeding from the gums has, however, so much reduced the patient, that he has been for several months past unable to work at his occupation.

Case 2.—Mrs. S., circiter 60, healthy and active, applied to have a tooth extracted, having suffered much, as she said, from toothach. Two of the molar teeth in the left side of the under-jaw were drawn, but without relief to the pain, which was of the severest kind, and spread over the whole cheek up to the temple; the pain was intermittent, and when the paroxysms were absent, she was perfectly at ease. A strong solution of camphor, in spirit, to the cheek, as in the former case, had no beneficial effect. The carbonate of iron was then administered in half-scruple doses thrice a day; but about ten days elapsed before any amendment took place; however, on continuing the medicine for a week longer, the peculiarly vehement pain was relieved, and by a longer continuance ultimately subdued. Many months have now elapsed since she discontinued this medicine, and during that time she has not had the slightest return of the complaint.

Case 3.—C. Purves, a stout married woman, fifty years of age, had been long afflicted with a severe pain of the right side of the face, which she attributed to a spoilt tooth in the left side of the under jaw. The tooth was removed without affording any relief. She described the pain as proceeding from the socket, extending along the jaw to the right side, and darting upwards to below the orbit. A plaster of tar was applied to the affected cheek without effect. I was induced to try tar from the report of Mr. Colville, of Ayton, who cured a severe case of tic douloureux withit after all the usual remedies had failed; but in the two cases in which I used the pix liquida, it became so exceedingly disagreeable from the soreness and tenderness of the parts covered by it, that the patients could not be prevailed on to persevere. It seemed to have little effect in relieving the disorder; but in a third case in which I tried it, the sufferings of the patient were much alleviated, while the carbonate of iron, though persevered in for a longer time than in any of the cases here reported, had not the smallest effect on the disease. In the present case, the carbonate was given in scruple doses twice a day with the most decided advantage. In the course of a week, the pain was in a great degree removed, and the patient enjoyed more freedom from suffering than for several months past. Three weeks after the carbonate was discontinued, a recurrence of her sufferings came on. The medicine was again ordered, and she now enjoys comparative ease.

These cases may not have been real tic douloureux, yet the carbonate of iron has afforded them great relief, and I trust it will be found effectual in many similar affections. Dr. Blundell, in his invaluable lectures, has recommended this medicine in the odontalgia of pregnancy, and I think that I have seen beneficial effects from it in the common forms of toothach. The form in which I have given the carb. ferr. was in powder, combined with a little cinnamon, and mixed with treacle or jelly. During its exhibition, it is proper to give now and then some gentle laxative to counteract its constipating effects; the pilulæ aloeticæ of the Edinburgh Pharmacopœia will answer very well for this purpose.

NATIVE OIL OF LAUREL.

To the Editor of The Lancet.

Sir,—In the course of my excursions in the interior of South America, I chanced to acquire a knowledge of a very peculiar product, which I afterwards made known in Demerara under the denomination of *native oil of laurel* (*siruba* of certain inland tribes), being a sort of native ethereal or volatile fluid which collects in the cavities of a large tree, in Guiana, belonging to the natural order of *laurineæ*.

Respecting this substance and its uses I published some notices in the colonial papers in 1824, but no account of it, as I am aware, has ever appeared in any London publication. It is not strange, therefore, that attempts should have lately been made to introduce the oil as a new discovery: I am informed that a person in Surinam has recently done this. The claim, however, must appear absurd in the Colonies, and I should not consider this, alone, as requiring a notice from me, but I find that some composition has lately been produced under the name of "medicated native oil of laurel," as "a remedy in gout and rheumatism." I have procured a phial of it, and it proves to be oil of turpentine disguised.

It is a matter, indeed, of little consequence who may lay claim to the discovery, but having imported the oil in some quantity, and at no small expense, I cannot properly allow these fraudulent attempts to pass altogether unnoticed. The port charges on a single jug or demijon of this fluid, amounted to 5*l.* 10*s.*, at the West India Docks.

Not having been advertised, the medicine remains unknown in London; excepting to some gentlemen from Demerara, and a few others, who prize it highly, and urge me to introduce it to public notice, especially as, if supplanted by a spurious imitation, nothing conclusive can be ascertained respecting its medicinal virtues. I gave it the name of "native oil" as being purely a product of nature, and such an one as experience has fully persuaded me will never receive any real improvements from art.

I have given away considerable quantities for the pupose of experiment, and have received the most satisfactory accounts of its operation, but I cannot afford to furnish any more of the oil on the same terms. I have derived no pecuniary advantage or compensation, nor sought any, either for this or any other discoveries (if so I may speak), although the different outfits for procuring this and other useful articles from the interior of Guiana, have cost me some hundred pounds. But anxious as I am to make a knowledge of it general in the profession, I have committed the bulk of it to the care of Mr. Burfield, 180, Strand, at whose house they may rely on obtaining it in the state in which it was drawn from the tree. I presume that no apology or arguments will be necessary in justification of this step; there is no secret nor mystery attempted; the oil is a simple product of nature, *sui generis*, and is not to be classed with quack medicines of unknown, and, probably, deleterious constituents.

With regard to what is stated of the medicinal properties of the native oil in the paper of 1824, I may observe that the main part has been pretty fully established by subsequent experience, and some new views of no small importance have, moreover, been acquired.

The two Demerara papers above alluded to, with other documents, are herewith transmitted, that any extracts you may think proper may be made therefrom. I have the honour to be, Sir,

Your obedient servant,
J. Hancock, M.D.

50, Stafford Place, Pimlico,
July, 1830.

[We collect the following particulars respecting the product referred to in Dr. Hancock's communication, from the papers with which his letter was accompanied. The oil is yielded by a large aromatic tree, of a compact texture and brown colour, growing in forests at the head of the Essequebo. Its medicinal properties, externally applied, are powerfully discutient, and internally are diaphoretic, diuretic, and resolvent. The reports of the Indians, regarding its efficacy in rheumatic affections of the limbs, exhibited in doses of 20 to 40 drops twice a day, are extravagantly eulogistic. The mode of its production is very singular, and presents one of the rarest anomalies in vegetable physiology; it is a pure spirit, or volatile oil, deposited by a natural process, within venous reservoirs, situated at various depths in the trunk of the tree, which, when cut into, yields the oil in sudden and abundant gushes. The immense quantity of twenty-five gallons is affirmed to have been obtained at once from a single vein. The deposit is sometimes sufficient to burst the tree, perfuming the forest for leagues around. The specimen sent to us by Dr. Hancock is very clear and pellucid, and resembles an essential oil produced by distillation. Its taste is warm, aromatic, and piquant, with an odour not unlike spirits of turpentine or yellow deal; it is very volatile and inflammable; is not acted upon by alkalies or acids, and dissolves caoutchouc. There is a very singular fact observable, with regard to its specific gravity. However paradoxical it may seem, this product floats on the surface of a mixture of equal parts of ether and proof spirit, although the specific gravity of the oil is actually *greater*, by the hydrometer, than that of the proof spirit or the compound.]

PROPRIETY OF OPERATIONS ON INFANTS.

To the Editor of The Lancet.

Sir,—In your Number for the 23d of January last (No. 334, page 375), I observe a report of an operation for the removal of a congenital tumour from the neck of a child of eight weeks' old, performed by Mr. Cornelius Tripe, a surgeon residing at Devonport, the object of publishing which, I am at a loss to divine. Whether intended to promulgate and illustrate a new principle in surgery, or to support an established one, and to show the consequences of a deviation therefrom,—in either instance, the illustration is most unhappy. Perhaps, however, it was published as a measure of defence, for the voice of public opinion was rather loud upon this occasion. If so, the paper, after the pledge which was given, is an *ex-parte* statement, and the only way to enable an impartial person to form a correct opinion on the matter, will be to detail the circumstances of this catastrophe as known and understood on the spot. I have no wish to keep alive the popular excitement which the occurrence created, as the length of time allowed to elapse will prove. I view it in the light of a *professional question*, which, by its publication, it is made. It is, however, but right to say, that the challenge would have passed unnoticed by me, had either of the gentlemen who expressed an intention to reply to it, come forward to do so, and it had not been bruited about that the case was drawn up in such a masterly style that it was unanswerable and unassailable!

Mrs. A. was attended in her accouchement by Mr. Watson. The tumour on the infant excited his attention, and he requested the opinion of Dr. Glasson, who con-

sidered it of an innocuous character, a mere enlarged hydatid, and discouraged any interference during the early infancy of the patient, and the quiescent state of the tumour. The accoucheur subsequently requested the presence, in consultation, of Messrs. Lower and Baldy, whose opinions coincided with those of Dr. Glasson and himself.* It was at this juncture that the operator was called in. A consultation ensued, in which the attendant of the family, Mr. Watson, with his friends Messrs. Lower and Baldy, met the operator and his friends, Dr. Glasson being objected to, because it was a *surgical case*. The gentlemen named, say that they urged their opinions against the necessity for, or expediency of, any attempt at excision, because the tumour was harmless, and the child was thriving. The operator afterwards called a consultation of his own, and proceeded to operate, the medical men originally called in by the accoucheur, as well as himself, declining to be present at an operation, which they had expressed a belief would be destructive of human life. The senior member of the profession declared to the writer of this paper, that he had a week before the operation "warned the operator" to beware of the consequences; that he had conjured him, as he valued his feelings as a parent, his peace of mind, and character as a man, his reputation as a surgeon, to abstain from what he meditated; that he urged upon his consideration the impossibility of a child not more than eight or nine weeks old, being able to sustain the shock of such an operation; that the infant was a mere bundle of nerves, that it was scarcely a thing of this world, and that if the experiment were made, the defenceless being would die under the knife," a presage which, as your correspondent informs us, he has succeeded too well in fulfilling; yet who, in perusing this case, would imagine that the operation had been undertaken under these circumstances? And up to this hour, not one of those who opposed the operation, have ever seen the tumour since its excision, except Mr. Watson; neither could a sight be obtained even by him of the parts after the operation and death, which were consecutive, if not simultaneous.

Of those who saw the tumour before excision, I have the assurances of Messrs. Lower, Baldy, and Dr. Glasson, that the base was much more extensive than the operator describes.† It is declared by them to have extended from the clavicle over the pectoral muscle beneath the axilla, to the inferior margin of the scapula, and that it was the danger of excessive irritation from exposing such an extensive surface, which induced them to oppose the operation. As for hæmorrhage, that was not thought of; the tumour was not vascular; indeed so inert was its character, that the infant lay on either side with perfect indifference; neither did it manifest the slightest pain upon pressure with the hand. It was healthy and thriving, and was taken smiling from its mother's arms; but I submit, that the propriety of undertaking the operation, is not to be judged by what others have done in cases that are not analogous, but by a reference to the physiological laws of infantile life in unison with the peculiar circumstances of the case under consideration. Was the tumour of a malignant character? Was it vascular? Was it organised? Did it increase in size? Did it retard the growth of the infant? Did it impose any present suffering upon it? Did it threaten any immediate danger? These questions are not only negatived by the gentlemen before named, but tacitly so by the operator's statement. Then why, it was asked, was the operation performed? At the instigation of * * * *, was Mr. Lower's reply. With all due deference, I protest against Mr. Lower's opinion, believing that the personage he named, is neither so ignorant nor so unscientific as he would have us imagine. But if I understand any thing of the anatomy and physiology of infantile life (and if I do not, I do declare myself most anxious to learn), the brain and nerves of a fœtus and of an infant for many months after birth, bear an amazing proportion to its entire volume, compared with adult life; that the nerves of sensation are far more acute in their functions at that period, while those of perception are far less so: presuming that these facts are admitted, I would add, as I have always been taught, that the proneness to intense irritative action in infantile life, from the causes above named, make it desirable at all times to delay an operation calculated to excite that action, and especially if it can be safely deferred to a more advanced period of existence. If there be any truth in the hackneyed asser-

* By the operator's account, the correctness of this diagnosis is evident, as the tumour appears to have been a vesicular or hydatidoid congeries, more or less transparent or opaque.

† What a tumour may measure when detached from the living surface, is one question; what extent of surface its removal will expose, is another; if, however, it measured no more than three inches when the excision took place, while it is asserted to have been more than double that extent six or seven weeks before, the inference is, that it must have diminished in size by absorption,—rather a strong argument against removing it at all.

tion, that such is the frail tenure of infantile life, that it will not admit of the remitted attention of the mother for a few hours, and that a number of children are lost under twelve months, from the irritation of dentition alone,—what chance has the infant of nine weeks old, of surviving an operation which must expose one-eighth part of the surface of its body? Need I advert to the many fatal terminations of comparatively slight burns and scalds in early infancy? It is upon these points alone, that the expediency of the operation turns. If what I have detailed as facts and opinions, be gross delusions; if I have been nurtured *in error* and *am grown old in ignorance*, then, I trust, I shall have the advantage of being set right by some of the admirers of the operation; but if it be consistent with the present condition of pathological science, then I submit, that a rash resort to the *ultima ratio chirurgorum* is pretty clearly proved. To talk of what others have done, is a sorry mode of justification. Suppose I were called to a case of injury of the hip or thigh in a child of five or six months old, and were to assert that the thigh was dislocated, and, in my efforts to reduce an imaginary luxation, were to detach the shaft of the bone from its epiphysis, thus rendering the child a cripple for life,—would it avail me aught to say, that both Sir Astley Cooper and Mr. Earle had disagreed as to the diagnosis of injuries of the hip-joint? Or in a case of unjustifiable operation for cataract, would it justify me to say, that Mr. Ware had occasionally failed? A hundred other such cases might I quote. That great and distinguished surgeons have erred, and do sometimes fail, is most true; but that such failure may be pleaded in excuse for all the blunders which vanity may prompt or recklessness consummate, I dare not presume to assert. Allusion to what this person said, and that person did, because we have heard that there are or were such persons in existence, is of a piece with the anecdote, that Homer sang his songs through the public streets,—"So do I," quoth the ballad singer. I am, Sir,

Your very humble servant,

JOHN WILLIAMS.

Devonport, 11th May, 1830.

[We have ventured to abridge part of this letter, which was only received in June.]

SYPHILIS.

To the Editor of THE LANCET.

SIR,—You will oblige me by inserting the following cases in your very useful hebdomadary, as they may, in some degree, confirm, and serve to extend, the very important practice of Drs. Christine and Benaben. Yours ever, &c.

R. D. FORSTER.

11, Middlesex Place, New Road,
3rd July, 1830.

CASES OF SYPHILIS CURED BY THE USE OF THE CHLORIDE OF GOLD AND SODA.

1. A medical friend of mine brought some of the chloride from Paris, where he had been induced to use it in his own case (confirmed syphilis), mercury having been laid aside from the irritation it had previously produced, when exhibited for slight torpidity in the action of the liver. He stated that it succeeded, and produced a cure in a fortnight, but was continued three weeks. He gave me four grains of the salt to make trial with, recommending it most strongly. This was in 1827.

2. Mr. S. T. applied to me in May, 1828, with one large chancre near the frænum, which had existed a fortnight or three weeks, and a bubo in the right groin, which was considerably inflamed. These followed a doubtful connexion during inebriation. He complained of the impossibility of taking mercury, as he was on a visit to a relation. The chloride of gold and soda was proposed and tried. Two surgical friends saw this gentleman next day, and were of opinion that the case was clearly syphilitic. I exhibited the remedy in the following manner, which was, indeed, that first used.

℞ *Chlorid. auri et sodæ*, gr. j;
Sacchari in pulvere, ʒss. Bene misce et divide in chart. xij.

The following direction was given.—One of these powders to be placed on the tongue, and rubbed against the roof of the mouth until dissolved; this to be repeated twice a day. The medicine of course discolours the tongue and mouth, but produces no further inconvenience. On the fourth day, the chancre was more healthy. Perspiration, which was very evident the two first days of the trial, was much lessened; one-eighth, instead of one-twelfth of a grain, was therefore ordered. 8th day, chancre nearly healed; resume the former dose of one-twelfth. 11th day, chancre healed; the powders to be taken for a week longer. No secondary symptoms have appeared since: the gentleman was suffering from these in a slight degree previous to the present infection.

3. J. Campbell, aged thirty-five years, stout and healthy in general, applied for assistance 13th July, 1829, with two chancres, and a bubo of a fortnight old, which were progressively getting worse. Ordered some aperients; and, on the 21st, the chloride as advised above. This delay arose from being unable to purchase the salt, and being

therefore obliged to prepare it, as directed by Mr. Faraday, I believe, in 1826, in the "Journal of Science." Continued the same dose, and, on 1st of August, chancre had healed. 7th, An aperient draught required. 12th, Last powders sent, which were directed to be continued. On the 16th he returned, with trifling pain in the right side and cough, which he imagined arose from the perspiration (which is still considerable) having been stopped. Saline aperients and small blister. This patient resided in the country, ten miles distant; and I heard nothing more of him for two months, when he wrote to me from some part of Hampshire, to say that the pain and cough disappeared two days after his last visit to me, and that he had been quite well since.

4. Mr. C. M., one chancre on glans and slight pain in groin; the former appeared a month since, and had gradually increased in size. 24th July, 1829. Twelve powders of the chloride of gold and soda. The chancre dressed with weak red precipitate ointment. 27th. Solution of extract of belladonna to apply to under part of penis, to mitigate troublesome erections. 31st. Twelve powders,—one three times a day; the chancre granulating healthily. 4th Aug. Powders repeated as last advised. 9th. Wrote from Cambridge to say he was quite well. Continue powders twice a day for one week. Heard nothing of this case after November, at which time the gentleman remained in perfect health.

Observations.—In all these cases, and in some which have since occurred, the only *evident* effect of this remedy was, the perspiration, which gradually diminished in quantity as the system became accustomed to the stimulus: in none but the last case was any dressing but dry lint applied to the chancre, and this difference did not seem to be influential.

The following was the formula for preparing the chloride which I used. It is merely a reduction in quantity of that mentioned in the "Journal of Science."

Dissolve 96 grains of pure gold in nitro-muriatic acid; evaporate and crystalize; dissolve the crystals of the chloride of gold, obtained in pure water; add 30 grains of *decrepitated* chloride of soda. Evaporate the solution and crystalize. This salt is slightly deliquescent, and must, therefore, be kept in a stoppled phial.

EXTIRPATION OF THE UTERUS.

In the morning of the 20th of June, this operation was performed by M. Dubled, in the presence of M. Récamier and several other practitioners. The operator evinced as much skill and *sang-froid*, as the patient did courage and resignation; she died, however, twenty-two hours after the operation. She was twenty-seven years of age, and had borne three children, the youngest of whom was scarcely nine months old. A short time before her last confinement, she had been in the Hôtel-Dieu under M. Récamier, with carcinoma uteri, which made very rapid progress; and of which M. Récamier had told her she could not be cured, but by a very painful operation, which he, however, declined performing himself, having resolved never to perform the extirpation of the uterus again. The operation lasted twenty-five minutes, on account of the extreme softness of the os uteri, which rendered it impossible to draw down the uterus into the vagina; the ligatures were applied before the division of the broad ligaments, and no great quantity of blood was lost during the operation. Towards the evening, the abdomen having become tense and painful, and there being also considerable febrile excitement, she was bled, and had leeches and emollient fomentations applied to the abdomen. She passed a rather restless night; a slight discharge of blood took place, which was arrested by cold compresses. She died on the morning of the 21st, twenty hours after the operation. On examining the peritoneum and intestines, were found perfectly healthy; a small quantity of dark-coloured blood was found in the small pelvis. The ligatures were found to have been well applied.—*Lanc. Franç.*

METROPOLITAN CEMETERY.

A correspondent, in allusion to the observations we lately made on the establishment of a public cemetery without the walls of London, has forwarded to us the following statement.

The opinion of Dr. Armstrong recalled strongly to my memory, that most of the deaths in a beautiful village in Suffolk have been occasioned by malignant putrid fever. Wangford church-yard, with its ancient gothic church, and the remains of its abbey, occupy the top of a little hill, and the small white houses and cottages, of which the town is composed, are built in a circle around. No spot can appear more healthy, or freer from malaria. There is a peculiar cleanness and cheerfulness about it, and it is altogether situated in an excellent natural climate. The ravages from typhus fever, therefore, can only be accounted for on Dr. Armstrong's principle,—from its central church-yard, which is thickly populated with dead, not very deeply buried,

according to the custom of the country. It is united to Henham, another extensive parish, which has neither church nor church-yard. Within the last seven years one of the surgeons, who lives in the yard, has three times had the typhus fever in his house. The last attack was dreadful, and fatal to several of a numerous family. Two masters of the little inn died of this fever; the glazier died of it: his wife laid many weeks at the point of death, and died a few months after; and a fine young man of twenty-three, whose sybarite (banns) was out-asked at church, died of a sudden putrid fever, two days before he was to have been married to their daughter, a village belle. The little poem, called "The new-made Grave," inserted in the New Monthly Magazine some summers ago, was occasioned by the authoress, in one of her walks through Wangford church yard, meeting the funeral of this young man, with his bride holding the pall: he was buried on the day appointed for their marriage. It is singular that these deaths did not happen in a time of general sickness, but months between, as if a malignant blight had suddenly crossed the individual, although there are few persons in that village who have not suffered at some time or other from typhus fever. It is by no means a fatal complaint in the neighbouring parishes. The typhus fever, some years, visits the populous towns of Halesworth and Bungay like a plague; both these towns, though perhaps otherwise favourably situated, have likewise central church-yards, thickly filled with dead.

BED FOR REDUCING DISLOCATIONS.

To the Editor of THE LANCET.

SIR,—Having completed the model of a bed to be applied to effect extension in case of dislocations generally, but more especially those occurring in the hip-joint, would you kindly favour me with a corner of your valuable journal, in offering the officers of any medical establishment the plan for their inspection. Having received the approbation of Sir Astley Cooper and many other eminent surgeons, I can, with more confidence, offer it to the notice of the public. Should it prove in any way useful to the profession, to which I have the honour of aspiring, my only object is attained.

I have the honour to remain,
Sir, your obliged,
STAFFORD BENSON,
Pupil at St. Bartholomew's Hospital.

June 28, 1830.
3, Carthusian Street,
Charterhouse Square.

TO CORRESPONDENTS.

THE letter signed "A Pupil of the London University," in reply to some remarks of Dr. Birkbeck, reached us too late for insertion.

A Medical Being. The publication in question is in the hands of men whose interest it is to degrade the really scientific members of the profession by disreputable appellations.

J. F. C. The letters of "Scrutator" were authenticated, or they would not have been inserted.

Veritas (not of Norwich), must be aware that we cannot, without great impropriety, insert such a communication as he has sent, unless it be authenticated.

Veritas of Norwich, in addition to his letter "to authenticate," will probably give us a reference to some person in town.

The Society for the degradation of English surgeons, which is censured by *Valens et Valens*, and many others of our correspondents, will depart this life without any very severe struggle.

Z. The observation of the *Lancette Française* is, that "in no country are the ill effects of nepotism more marked than in England. There, in spite of the efforts of the press, beneath the name of Cooper, and under shelter of this name, ignorance flourishes, raises its head, and resists the vigorous blows which it receives from independence and knowledge. There ignorance exults and its triumphs are confirmed by tribunals! But such triumphs are vile and contemptible. Tribunals cannot confer skill with their diplomas, nor can the most exalted patronage shield a blockhead from the scorn of the scientific world."—Our esteemed contemporary errs in supposing that much of either "exultation" or "triumph" is enjoyed by these "blockheads." Thanks to an honest press, "exultation" and "triumph" are suppressed by perpetual "fear and trembling."

SALE OF SPIRITS OF WINE WITHOUT A LICENSE.—The following letter is extracted from the last number of the *Gazette of Health*. It cannot be too widely circulated:—

"Treasury Chambers, May 26, 1830.

"SIR,—Having laid before the Lords Commissioners of his Majesty's Treasury your memorial, praying that you may be permitted to sell spirits of wine, by retail, without license, I am commanded by their Lordships to acquaint you, that your request cannot be complied with. I am, Sir,

Your obedient servant,
"GEO. R. DAWSON.

"Dr. R. Reece, 8, Bolton Row."